

Grant County Road Standards



November 3, 2009

Grant County Public Works
124 Enterprise St. S.E.
Ephrata, WA 98823

BOARD OF COUNTY COMMISSIONERS
Grant County, Washington

IN THE MATTER OF ESTABLISHING
ROAD AND BRIDGE CONSTRUCTION
STANDARDS ON ALL COUNTY ROADS

Resolution No. 09-093-CC

WHEREAS, standards for road and bridge construction are necessary to insure public safety and compliance with sound engineering principals, and

WHEREAS, it is the duty of the County Road Engineer to prepare standards of construction for County roads and bridges, and

WHEREAS, the Board of County Commissioners has examined and approved the standards of construction prepared by the County Road Engineer,

NOW, THEREFORE, BE IT RESOLVED, the Board of County Commissioners does adopt the following standards of construction for roads and bridges for all County road construction projects, major road maintenance projects, subdivisions, and establishments.

ADOPTED this 3rd Day of November, 2009.

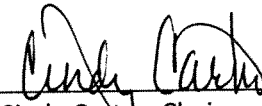
**BOARD OF COUNTY COMMISSIONERS
GRANT COUNTY, WASHINGTON**

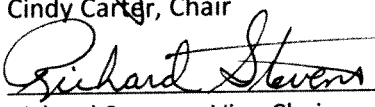
Yea Nay Abstain

☒ ☐ ☐

☒ ☐ ☐

☒ ☐ ☐


Cindy Carter, Chair


Richard Stevens, Vice-Chair


Carolann Swartz, Member

ATTEST:

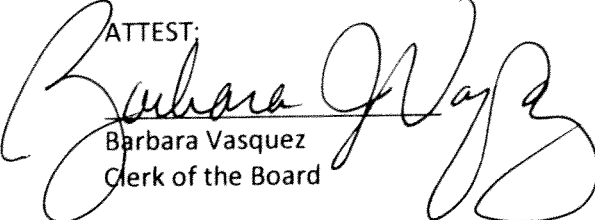

Barbara Vasquez
Clerk of the Board

Table of Contents

Section 1 – DEFINITIONS.....	1
Section 2 – General Requirements, New Construction	3
2.1 General Requirements.....	3
2.2 Construction Plans	3
2.3 Inspection and Construction Control	4
2.3.1 Inspection.....	4
2.3.2 Construction Surveying.....	5
2.3.3 Materials and Testing	5
2.3.4 Fees	5
Section 3 – Geometric Design Standards	6
3.1 General Requirements.....	6
3.1.1 Horizontal Alignment.....	6
3.1.2 Dead End/Secondary Access	6
3.1.3 Vertical Alignment	6
3.1.4 Vertical Clearance	6
3.1.5 Clear Zone	6
3.1.6 Traffic Control	7
3.1.7 Pedestrian Facilities.....	7
3.1.8 Bicycle Facilities	7
3.1.9 Railway Crossings.....	7
3.1.10 Utility Installations	7
3.1.11 Road Approach	7
3.1.12 Guardrail	8
3.2 Design Standards for Rural Access Roads	8
3.2.1 Function	8
3.2.2 Access Conditions	8
3.2.3 Traffic Features	8
3.2.4 Design Speed – MPH.....	8
3.2.5 Maximum Grades – Percent (%).....	9
3.2.6 New Bridges	9

3.3	Design Standards for Rural Major Collectors and Rural Minor Collectors	9
3.3.1	Function	9
3.3.2	Planning Features	9
3.3.3	Access Conditions	9
3.3.4	Traffic Features	9
3.3.5	Design Speed – MPH.....	10
3.3.6	Maximum Grades – Percent (%).....	10
3.3.7	New Bridges	10
3.4	Design Standards for Urban Access Streets	10
3.4.1	Function	10
3.4.2	Planning Features	10
3.4.3	Access Conditions	11
3.4.4	Traffic Features	11
3.4.5	Design Radius – Feet.....	11
3.4.6	Maximum Grades – Percent (%).....	11
3.4.7	New Bridges	11
3.5	Design Standards for Urban Collectors	11
3.5.1	Function	11
3.5.2	Planning Features	12
3.5.3	Access Conditions	12
3.5.4	Traffic Features	12
3.5.5	Design Radius – Feet.....	12
3.5.6	Maximum Grades – Percent (%).....	12
3.5.7	New Bridges	12
3.6	Design Standards for Minor Arterial Roadways	12
3.6.1	Function	13
3.6.2	Planning Features	13
3.6.3	Access Conditions	13
3.6.4	Traffic Features	13
3.5.5	Design Radius – Feet.....	13
3.5.6	Maximum Grades – Percent (%).....	13
3.5.7	New Bridges	14

Section 4 – Structural / Material Design Standards for County Roads	15
4.1 General Requirements.....	15
4.1.1 Design Loadings for Roadway	15
4.1.2 Construction Specifications	15
4.1.3 Traffic Control and Permanent Signing	15
4.1.4 Facilities for Pedestrians and Bicycles.....	15
4.2 Roadway Surface	15
4.2.1 Graded Gravel	15
4.2.2 Bituminous Asphalt	15
4.2.2.1 Application Rates	16
4.2.2.2 Application of Tack Coat.....	16
4.2.2.3 Time of Application.....	16
4.2.3 Hot Mix Asphalt	16
4.3 Structure	17
4.3.1 Structure Type.....	17
4.3.2 Traffic	17
4.3.3 Subgrade Characteristics	17
4.3.4 Weather	17
4.4 Stormwater / Drainage.....	17
Section 5 – Private Roads	19
5.1 Requirements.....	19

Appendix A – Summary of Minimum Roadway Design Standards

Appendix B – Typical Cross-Sections and Standards

Appendix C – Application to Construct Approach onto County Road

Appendix D – Application to Perform Work on County Road Right-of-Way.

Section 1 – DEFINITIONS

AASHTO – The American Association of State Highway and Transportation Officials

AASHTO Green Book - , American Association of State Highway and Transportation Officials, A Policy on Geometric Design of Highways and Streets, 2001, Fourth Edition

ADA – Americans with Disabilities Act of 1990, as amended.

BST – Bituminous Surface Treatment

Clear Zone – The designated unobstructed, relatively flat area provided beyond the edge of the traveled way for the recovery of errant vehicles. The clear zone includes any shoulders or auxiliary lanes. The desired width is dependent upon the traffic volumes, speeds and roadside geometry.

CSBC – Crushed Surfacing Base Course as per WSDOT Standard Specifications.

CSTC – Crushed Surfacing Top Course as per WSDOT Standard Specifications.

Functional Classification – The roadway classifications referred to herein are Federal Functional Classifications shown on the official classification maps prepared by the Washington State Department of Transportation.

HMA – Hot Mix Asphalt as per WSDOT Standard Specifications

MUTCD – The Manual on Uniform Traffic Control Devices

New Construction – The building of a new roadway or structure on substantially new alignment or the upgrading of an existing roadway or structure by the addition of one or more lanes.

Reconstruction – Modernization of an existing roadway by resurfacing, widening lanes, adding shoulders, or adding turn lanes at intersections.

Restoration – Replacement of a roadway facility which is commenced immediately after the occurrence of a natural disaster or catastrophic failure to restore the roadway or bridge for the health, welfare and safety of the Public. Current design standards do not apply when restoring a facility.

Primary Roads – Roads classified as rural major/minor collectors, urban collectors and urban arterials.

Road Approach – A private roadway or driveway built or constructed to allow access from private property to a County Road.

Roadway Width – The portion of a roadway between curbs or including shoulders intended for vehicular use.

Rural – That land area outside the boundaries of the federally designated urban areas as shown on the official urban area maps on file at the Washington State Department of Transportation.

Surface Width – The portion of a roadway for use by moving vehicles, between curbs or between shoulders, including turn lanes where such lanes are appropriate.

Surfacing – Aggregate, crushed or naturally occurring, lying above the subgrade of a road.

UDC – Grant County Unified Development Code

Urban – That land area within the boundaries of the federally designated urban areas (population greater than 5,000) as shown on the official urban area maps on file at the Washington State Department of Transportation.

Walkway – A continuous way designated for pedestrians and separated from the through lanes for motor vehicles by a curb, space, pavement marking or barrier.

WSDOT – Washington State Department of Transportation

Zoning – See the current Unified Development Code for Zoning Definitions and Requirements.

Section 2 – General Requirements, New Construction

2.1 General Requirements

- A. The construction of County roads shall comply with these standards and Grant County Development Code. All workmanship and materials shall be in accordance with the current edition of the WSDOT Standard Specifications for Road, Bridge and Municipal Construction and amendments thereto.
- B. A Public County Road shall serve all developments/plats unless it meets the requirements of Section 5 "Private Roads".
- C. A 60' minimum right-of-way is required on all County roads, unless individually approved after consultation with the County Road Engineer, by the Board of County Commissioners per RCW 36.86.010.
- D. The County Road Engineer in consultation with the Board of County Commissioners shall determine the need for on-street parking. Generally, commercial access and residential areas comprised of lot sizes of $\frac{1}{4}$ acre or less will require parking lanes. Rural roads which require parking lanes shall be built using the equivalent urban design standards specified.
- E. The County Road Engineer shall determine the roadway structure and surfacing required.
- F. The developer shall be responsible for permanent signing as approved by the County Road Engineer.

2.2 Construction Plans

Plans and special provisions shall be developed and submitted to the County Road Engineer. The drawings shall contain plan and profile, typical cross-sections, drainage features and details, utility installations and other special details required. An approved for construction line shall be on each applicable sheet for the County Road Engineer.

All construction within the public right-of-way shall be designed by or under the direct supervision of a registered professional engineer licensed to practice in the State of Washington. All drawings and support data submitted to the County for approval must bear his/her seal. The signature of the registered professional engineer will only be required on the approved final plans.

The Construction Plans must be approved by the County Road Engineer before any construction work is accepted by the County.

The County Road Engineer may exempt certain projects from this requirement if the projects size and scope is not large enough to be beneficial.

2.3 Inspection and Construction Control

A pre-construction meeting shall be completed prior to work commencing.

2.3.1 Inspection

Grant County Public Works will do the following inspections when notified by the developer/contractor on new or reconstructed roads prior to construction of the next phase:

Subgrade – After all grading and compaction activities are completed, the County will inspect the drainage structures, ditch and subgrade for width, alignment and elevation according to the approved plans.

Crushed Surfacing Base & Top Course – After placement, processing and compaction of all specified aggregates, the County will inspect the crushed surfacing. This inspection will verify that the specified depths of the aggregates have been placed and properly compacted across the entire road section.

BST – The County should be notified two (2) days in advance of the application of the prime coat. County inspectors will be on site during the prime coat application process to verify that the roadway surface is properly prepared, the grade of asphalt used meets County requirements, the application rate is acceptable and the entire roadway width is treated. The County shall again be notified after sweeping the prime coated surface, immediately prior to the application of the tack coat.

HMA – The County should be notified two (2) days in advance to the placement of the HMA. County inspectors will be on site during the paving to verify that the roadway surface is properly prepared, the HMA thickness, and that the HMA is being placed per WSDOT Standard Specifications.

Final – After completion of all road work and the installation of all specified road survey monuments and permanent signs, the County shall be contacted for a final inspection. Final approval and the release of any bonds or the signature of the final plat is contingent upon final approval of all road related work.

Each inspection shall be accepted and approved by the County prior to moving to the next step.

Failure of the developer/contractor to request any of the inspections outlined above may result in rejection of some or all of the work performed.

2.3.2 Construction Surveying

Subgrade, top of crushed surfacing base course and top of crushed surfacing top course hubs shall be set at 100' intervals on tangent sections and 50' intervals along curves on centerline and shoulder lines. The required hubing shall be completed prior to the appropriate inspection being requested.

2.3.3 Materials and Testing

The developer/contractor shall submit acceptance testing of road materials and compaction tests from a professional licensed engineer to the County Road Engineer for review and acceptance. Elements of the construction found deficient shall be brought into compliance before approval is given.

Compaction tests are required on subgrade, CSBC and CSTC with a testing frequency of 1 per 1,000 linear feet. Compaction tests on HMA shall be completed at a frequency of 1 lot per 400 tons, 5 tests per lot.

The required compaction tests shall be completed prior to the appropriate inspection being requested.

All testing shall be completed per WSDOT specifications.

2.3.4 Fees

Presently, the County does not charge inspection fees, re: Section 2.3.1. However, the County reserves the right to impose inspection fees on large projects, roads disrupted by sewer and water projects, and road required to be upgraded via developer mitigation. Notice of an inspection fee will be made during preliminary project review.

Section 3 – Geometric Design Standards

3.1 General Requirements

3.1.1 Horizontal Alignment

The minimum curve radius for all new or reconstructed County Roads shall not be less than the values in the AASHTO Green Book, Exhibit 3-14, page 145 using a maximum superelevation rate of 4% for design speeds 35 MPH and less or a maximum superelevation rate of 6% for design speeds greater than 35 MPH.

3.1.2 Dead End/Secondary Access

The maximum length for a public dead-end county road and a public combined with a private dead end road is ½ mile (2,640 feet).

A maximum of 36 parcels can be served by one access point before secondary access is required.

3.1.3 Vertical Alignment

A. Maximum Grades

The maximum and minimum grades for each roadway classification are in Sections 3.2 to 3.6.

B. Vertical Curves

Crest vertical curves shall be designed in accordance with the AASHTO Green Book, Exhibit 3-76, page 274, "Design Controls for Stopping Sight Distance and for Crest Vertical Curves".

Sag vertical curves shall be designed in accordance with the AASHTO Green Book, Exhibit 3-79, page 280, "Design Controls for Sag Vertical Curves".

3.1.4 Vertical Clearance

The minimum vertical clearance for all roadways shall be sixteen and one half (16.5) feet. Vertical clearance of structures above the walkway surface shall be a minimum of eight (8) feet.

3.1.5 Clear Zone

A. Shoulder Section

The clear zone (excluding traffic control signs and break away supports) shall be designed in accordance with the AASHTO, Roadside Design Guide, 3rd Edition, Table 3.1, page 3-5, "Clear-zone distances in feet from edge of through traveled way".

B. Curb Section

The clear zone between curb face and the closest part of any fixed object (excluding traffic control signs and break away supports) shall be at least three (3) feet.

3.1.6 Traffic Control

All traffic control devices shall conform to the MUTCD with revisions and modifications for Washington State.

3.1.7 Pedestrian Facilities

Sidewalks shall be constructed with Portland Cement Concrete. Sidewalks shall be at least five (5) feet in width and four (4) inches in thickness. Sidewalk configurations shall be in accordance with the WSDOT Design Manual and the WSDOT Standard Plans except for sidewalk width. All sidewalk ramps and features shall be ADA compliant. The detectable warning areas shall be constructed with pavers (bricks), Red (Rustic) in color.

3.1.8 Bicycle Facilities

On primary roads intended to accommodate a designated bicycle route, the current WSDOT Design Manual section on bicycle facilities should be used as a design guideline.

3.1.9 Railway Crossings

Design shall be based on current accepted standards and requirements of the Washington State Utilities and Transportation Commission.

3.1.10 Utility Installations

Design shall conform to the requirements of WAC 136-40 and the requirements listed per Grant County's Utility Accommodation Policy, Figure 4-5.

3.1.11 Road Approach

Design shall conform to the requirements of RCW 36.75.130 and the requirements listed on the “Application to Construct Approach onto County Road”, Appendix C

. An approved “Application to Construct Approach onto County Road” shall be required prior to construction.

3.1.12 Guardrail

Design and location shall be based upon accepted engineering practices and the current WSDOT Design Manual. Installation shall conform to WSDOT standard plans.

Bridge approach railings are required when speed limits are greater than 35 MPH and shall be made structurally contiguous with the bridge railing. Other locations shall be examined for the need for protection, refer to the WSDOT Design Manual. If the engineering study results in the decision that protection is not justified, documentation to that effect should be retained.

3.2 Design Standards for Rural Access Roads

3.2.1 Function

- A. Access – ADT < 100: To provide service from adjacent property to other access roads or collectors.
- B. Access – ADT 100 – 400: To provide service from adjacent property and other access roads to collectors.

3.2.2 Access Conditions

Intersections at grade with direct access from adjacent property permitted.

3.2.3 Traffic Features

Traffic signals and signing as warranted by the MUTCD.

3.2.4 Design Speed – MPH

	ADT	
	< 100	100 – 400
Flat Terrain	40	50
Rolling Terrain	30	40
Mountainous Terrain	20	20

3.2.5 Maximum Grades – Percent (%)

	ADT	
	< 100	100 – 400
Flat Terrain	7	7
Rolling Terrain	9	9
Mountainous Terrain	12	12

These grades may be exceeded for short distances when permitted by the County Road Engineer.

3.2.6 New Bridges

Roadway Width (Min.): Not less than approach roadway width and not less than 28 feet.

Design Load (AASHTO): HL-93

Vertical Clearance (Min.): 16.5 feet

3.3 Design Standards for Rural Major Collectors and Rural Minor Collectors

3.3.1 Function

- A. Major Collectors: Provide service to larger towns not directly served by the higher systems and to other traffic generators of equivalent intracounty importance.
- B. Minor Collectors: Provide service to remaining smaller communities to collect traffic from local roads and bring all developed areas within a reasonable distance of a higher system road.

3.3.2 Planning Features

Should be spaced at intervals consistent with population density and should provide for unimpeded traffic flow at highway speed whenever possible.

3.3.3 Access Conditions

Intersections at grade with indirect access to adjacent property where possible.

3.3.4 Traffic Features

Traffic signals and signing as warranted by the MUTCD.

3.3.5 Design Speed – MPH

	ADT		
	< 400	400 – 2000	> 2000
Flat Terrain	50	50	50
Rolling Terrain	40	40	40
Mountainous Terrain	30	30	40

3.3.6 Maximum Grades – Percent (%)

	ADT		
	< 400	400 – 2000	> 2000
Flat Terrain	6	6	6
Rolling Terrain	8	8	7
Mountainous Terrain	10	10	10

These grades may be exceeded for short distances when permitted by the County Road Engineer.

3.3.7 New Bridges

Roadway Width (Min.):	Not less than approach roadway width and not less than 28 feet.
Design Load (AASHTO):	HL-93
Vertical Clearance (Min.):	16.5 feet

3.4 Design Standards for Urban Access Streets

3.4.1 Function

To provide access from adjacent property to other access streets or collectors.

3.4.2 Planning Features

Should be designed to incorporate traffic calming features. Secondary access issues for Emergency vehicles may be deemed necessary by the County Road Engineer.

3.4.3 Access Conditions

Intersections at grade with direct access from adjacent property permitted.

3.4.4 Traffic Features

Traffic control measures as warranted by the MUTCD but not to encourage traffic with trips through the area. Parking restricted as necessary.

3.4.5 Design Radius – Feet

	Radius
Flat Terrain	420
Rolling Terrain	200
Mountainous Terrain	115

3.4.6 Maximum Grades – Percent (%)

	Percent
Flat Terrain	8
Rolling Terrain	10
Mountainous Terrain	12

These grades may be exceeded for short distances when permitted by the County Road Engineer.

3.4.7 New Bridges

Roadway Width (Min.): Not less than approach roadway width.

Design Load (AASHTO): HL-93

Vertical Clearance (Min.): 16.5 feet

3.5 Design Standards for Urban Collectors

3.5.1 Function

To collect and distribute traffic from higher-type arterial streets to access streets, or directly to traffic destinations; to serve neighborhood traffic generators such as one store or a small group of stores, elementary school, church, club house, small hospital or clinic, small apartment area, etc.

3.5.2 Planning Features

Usually functions as an arterial street only within one area of a community, and serves traffic only with an origin or destination within that area.

3.5.3 Access Conditions

Intersections at grade with direct access from adjacent property permitted.

3.5.4 Traffic Features

Traffic control measures as warranted by the MUTCD but not to encourage traffic with trips through the area. Parking restricted as necessary. On street parking required as necessary.

3.5.5 Design Radius – Feet

	Radius
Flat Terrain	575
Rolling Terrain	440
Mountainous Terrain	300

3.5.6 Maximum Grades – Percent (%)

	Percent
Flat Terrain	7
Rolling Terrain	9
Mountainous Terrain	10

These grades may be exceeded for short distances when permitted by the County Road Engineer.

3.5.7 New Bridges

Roadway Width (Min.): Not less than approach roadway width.

Design Load (AASHTO): HL-93

Vertical Clearance (Min.): 16.5 feet

3.6 Design Standards for Minor Arterial Roadways

3.6.1 Function

To collect and distribute traffic from higher-type arterial highways to less important streets, or directly to traffic destinations; to serve secondary traffic generators such as community business center, school, community center, athletic field, neighborhood shopping center, major park, multiple residence area, grouping of churches, concentration of offices or clinics, large hospital, etc. and traffic from neighborhood to neighborhood within a community.

3.6.2 Planning Features

Desirably located on community and neighborhood boundaries. Arterial streets should pass adjacent to but not through major shopping centers, parks and other homogeneous areas. May be located within neighborhoods only when necessary to provide adequate service to traffic generators located within neighborhoods.

3.6.3 Access Conditions

Intersections at grades with indirect access from adjacent property where possible.

3.6.4 Traffic Features

Traffic signals and signing as warranted by the MUTCD.

3.5.5 Design Radius – Feet

	Radius
Flat Terrain	955
Rolling Terrain	560
Mountainous Terrain	410

3.5.6 Maximum Grades – Percent (%)

	Percent
Flat Terrain	6
Rolling Terrain	8
Mountainous Terrain	10

These grades may be exceeded for short distances when permitted by the County Road Engineer.

3.5.7 New Bridges

Roadway Width (Min.): Not less than approach roadway width.

Design Load (AASHTO): HL-93

Vertical Clearance (Min.): 16.5 feet

Section 4 – Structural / Material Design Standards for County Roads

4.1 General Requirements

4.1.1 Design Loadings for Roadway

The design live load for County Roads shall be based upon accepted engineering practices and the requirements listed herein.

4.1.2 Construction Specifications

The current edition of WSDOT's Standard Specifications for Road, Bridge, and Municipal Construction shall be used.

4.1.3 Traffic Control and Permanent Signing

All traffic control devices shall conform to the MUTCD with revisions and modifications for Washington State.

4.1.4 Facilities for Pedestrians and Bicycles

All appurtenant facilities for roads shall be designed using accepted engineering practices and standards.

4.2 Roadway Surface

Roadway surface can be one of three specific types:

- Graded Gravel
- Bituminous Asphalt
- Hot Mix Asphalt

4.2.1 Graded Gravel

This roadway consists of crushed surfacing top course and crushed surfacing base course or equivalent free draining sub-base placed on suitable sub-grade. The County Road Engineer will determine the depth and type of surfacing required as outlined in Section 4.3.

4.2.2 Bituminous Asphalt

This roadway consists of a prime and tack coat of bituminous asphalt and coverstone applied over the crushed surfacing. A BST application plan shall be

submitted and approved by the County Road Engineer prior to placement. The County Road Engineer will determine the depth and type of surfacing required as outlined in Section 4.3.

4.2.2.1 Application Rates

Liquid Asphalt (gal. per sq. yd.) Applied at Temp.		Aggregate Type	Aggregates (lbs. per sq. yd.) Applied (Min.)
Prime Coat			
MC 800*	0.55 @240°F	Crushed Coverstone ½"	30+ lbs
HFE 150	0.55 @175°F	Crushed Coverstone ½"	30+ lbs
Tack Coat			
MC 800*	0.30 @240°F	Crushed Coverstone ½"	35+ lbs
HFE 150	0.40 @175°F	Crushed Coverstone ½"	35+lbs
CMS-2H	0.50 @180°F	½" - #4 Chips	30+lbs
CRS-2P	0.52 @165°F	½" - #4 Chips	35+lbs

*When MC 800 is used as the Prime Coat it shall also be used for the Tack Coat

4.2.2.2 Application of Tack Coat

The second application (tack coat) shall be applied not less than ten (10) days after the first application (prime coat) for MC-800 asphalt.

The second application (tack coat) shall be applied not less than six (6) days after the first application (prime coat) for HFE-150 asphalt.

The sweeping of all loose aggregate, dust or foreign matter from the prime coat shall be performed prior to application of the tack coat. Contact Grant County Public Works for the time when the final sweeping shall take place.

4.2.2.3 Time of Application

All work should be performed between May 15th and September 15th and only if the weather is suitable as specified in the WSDOT Standard Specifications. The construction of any BST roadway before May 15th or after September 15th shall only be performed after receiving written authorization from Grant County Public Works.

4.2.3 Hot Mix Asphalt

This roadway consists of one or more courses of plant mixed Hot Mix Asphalt placed on a base and sub-grade prepared in accordance with Section 4.3. Mix design and placement shall be done in accordance with the requirements of the County Road Engineer. A minimum compacted depth of 3 inches is required.

4.3 Structure

The depth and type of crushed aggregate surfacing required will be directly related to roadway structure type, traffic, subgrade characteristics and weather. The County Road Engineer will determine the required crushed surfacing depths using these parameters in accordance with currently accepted engineering principals and standards. The minimum crushed surfacing depths shall not be less than 4 inches crushed surfacing base course and 2 inches crushed surfacing top course, or as approved by the County Road Engineer.

4.3.1 Structure Type

Industrial, Commercial, Agricultural, Residential – Urban/Rural

4.3.2 Traffic

Average daily traffic and percentage of trucks.

4.3.3 Subgrade Characteristics

The County Road Engineer will determine the relative load carrying capacity of a soil. Generally, clays and silts have less load carrying capacity than sands and gravels. Soils with lesser load carrying capacity will require greater surfacing to distribute vehicle loads and provide protection to the subgrade.

4.3.4 Weather

The County Road Engineer will determine the seasonal effects that rainfall (irrigation), snow, ice, freeze/thaw cycle, and frost penetration have on the bearing capacities of subgrade materials and wearing surfaces.

4.4 Stormwater / Drainage

All stormwater facilities shall be designed in accordance with the current editions of Washington State Department of Ecology's "Stormwater Management Manual for Eastern Washington", WSDOT's "Highway Runoff Manual" and "Hydraulics Manual".

Culverts with a minimum diameter of eighteen (18) inches must be installed at all County road intersections and at all crossings of well defined natural drainage courses,

unless other provisions are made to handle the passage of surface run-off through the roadway prism. Best management practices shall be used during construction to manage stormwater. All internal plat roads shall handle all stormwater within the plat.

All drainage facilities within current or future County right-of-way must be of the type and nature that can be easily maintained by the County. This typically includes as a minimum 12 inch diameter storm sewer pipe, drywells and standard catch basins for curb and gutter roadway sections. All other facilities such as French drains, curtain drains and stormwater detention ponds shall be installed outside the County's right-of-way and be maintained by the applicant or homeowner's association.

Section 5 – Private Roads

5.1 Requirements

Private Roads shall be designed and built to the following requirements:

- Can serve no more than eighteen (18) parcels, with the exception of Planned Unit Developments.
- Are not allowed within the Urban Growth Area (UGA) boundaries of the cities or towns.
- A Right-of-Way width of sixty (60) feet shall be set aside for private roads.
- Shall meet the current edition of the International Fire Code and these standards.
- Shall not be longer than ¼ mile (1,320 Feet) dead-end without looping or secondary access.
- Shall have an all-weather capability, as determined by a licensed Professional Engineer.
- Shall have a minimum unobstructed travel width of twenty (20) feet.
- A Homeowners Association will be required to ensure proper maintenance of private road.
- These standards shall apply to large parcel land divisions where the purpose of the division is to sell home sites and these parcels are to be served by an access road system.

Appendix A

Summary of Minimum Roadway Design Standards

Minimum Roadway Design Standards For New Construction

County Road System

Summary

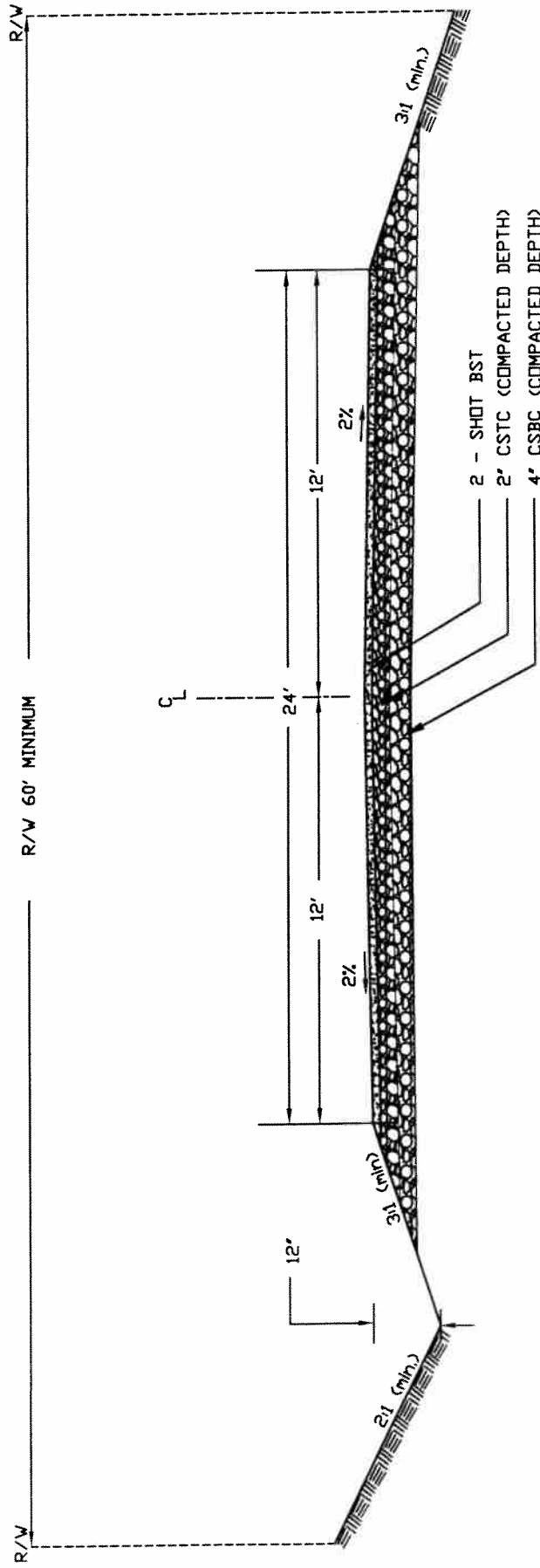
Federal FUNCTIONAL CLASSIFICATION		Rural Access			Rural Collectors, Major and Minor			Urban		
		Under 100	100 - 400	ADT < 400	ADT 400 - 2000	ADT > 2000	Access	Collectors	Minor Arterials	
Minimum Design ¹ Speed or Radius	Flat ²	40	50	50	50	50	410 ft.	575 ft.	955 ft.	
	Rolling ²	30	40	40	40	50	200 ft.	440 ft.	560 ft.	
Maximum Grade (%) ³	Mountainous ²	20	20	30	30	40	115 ft.	300 ft.	410 ft.	
	Flat	7	7	6	6	6	8	7	6	
Minimum Surfaced Width (Traveled Lanes) Shoulder Width ⁴	Rolling	9	9	8	8	7	10	9	8	
	Mountainous	12	12	10	10	10	12	10	10	
Minimum Surfaced Roadway Width (Between Curbs)	2 Lane	20	20	22	22	24	22	22	24	
	4 Lane					44		44	44	
Minimum Median Width (Ft.)	6 Lane									
	Each Side	2	3	3	6	8 ⁵	4	6	8 ⁵	
Minimum Right of Way Width (Ft.) ⁷	2 Lane	24	24	24	28	28	24	28	48 ⁶	
	4 Lane					44		44	48 ⁶	
New Bridges	6 Lane									
	W/2-Way Turn Lane Add.					10		As necessary	10	
Vertical Clearance		16.5 feet								
Roadway Width		Same as above from curb to curb or outside of shoulder to outside of shoulder, but in no case < 28' feet								
Design Loading		AASHTO HS 20-44 (MS-18) Minimum								

NOTES:

- Design speed or radius is the basis for determining geometric elements and does not imply posted or legally permissible speed.
- "Outlying Areas", "Medium Density Areas", and "Central Areas" may be substituted for "Flat", "Rolling", and "Mountainous", respectively.
- May be steeper for short distances where approved by County.
- Shoulders shall be widened 2 feet where guardrail is planned.
- May be 6 feet when slope to bottom of ditch does not exceed 4:1.
- 44 feet may be used in severely restricted areas.
- RAW widths less than 60 feet must be individually approved by the County Commissioners per R.C.W. 36.88.010.
- Add 10 feet for 4 - Lane sections with shoulders.

Appendix B

Typical Cross-Sections and Standards



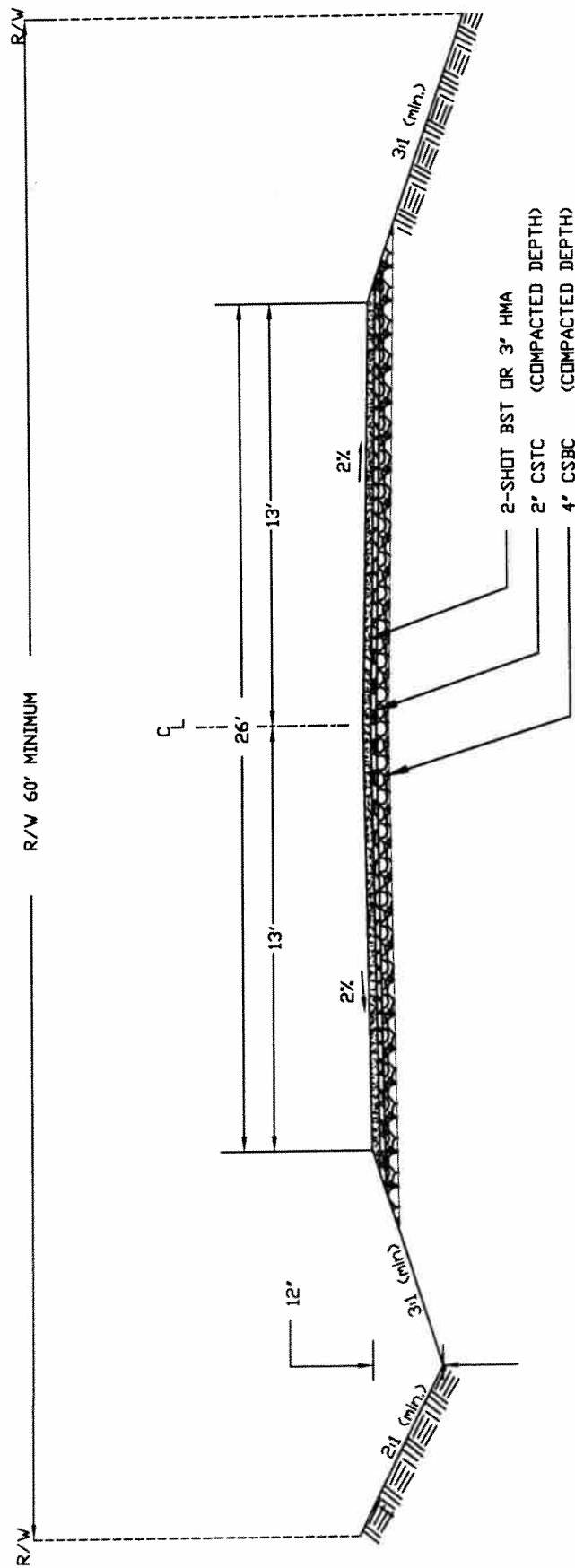
NOT TO SCALE

APPENDIX B
FIGURE 3-2-1

RURAL ACCESS ROADS
ADT UNDER 100
NEW CONSTRUCTION

ROADWAY
STANDARDS

GRANT COUNTY
PUBLIC WORKS DEPARTMENT



SHOULDER SECTION

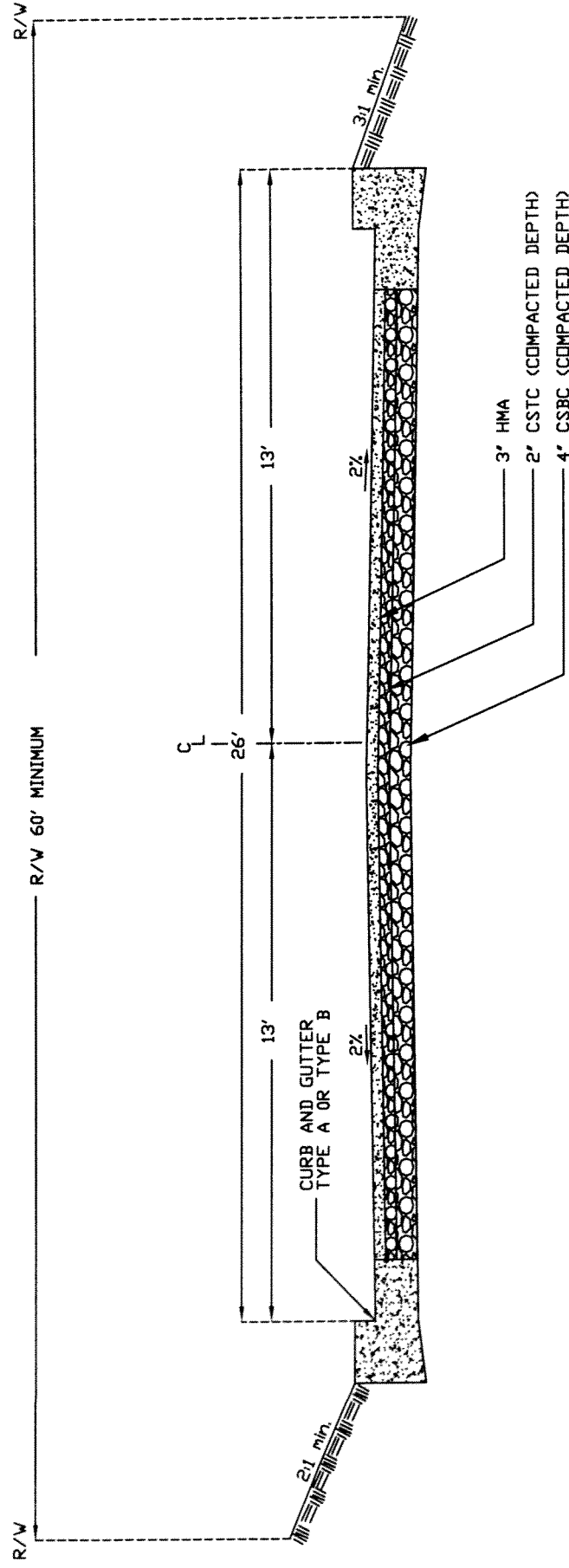
NOT TO SCALE

APPENDIX B
FIGURE 3-2-2

RURAL ACCESS ROADS
ADT 100 - 400
NEW CONSTRUCTION

ROADWAY
STANDARDS

GRANT COUNTY
PUBLIC WORKS DEPARTMENT



CURB SECTIONS

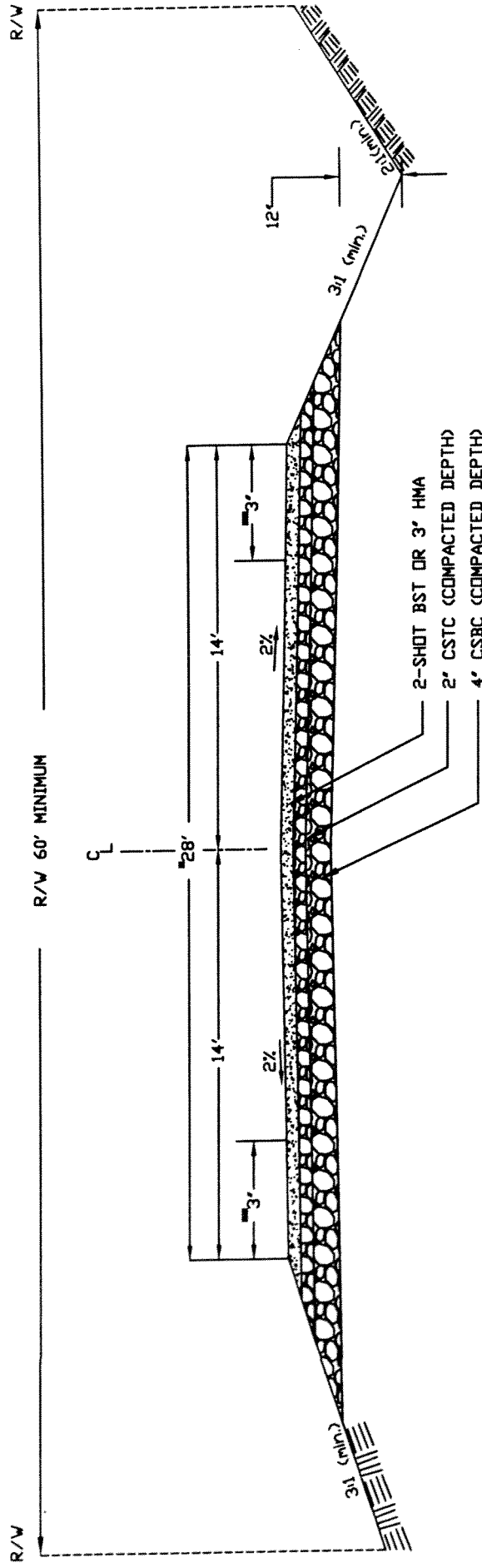
NOT TO SCALE

GRANT COUNTY
PUBLIC WORKS DEPARTMENT

ROADWAY
STANDARDS

RURAL ACCESS ROADS
ADT 100 - 400
NEW CONSTRUCTION

APPENDIX B
FIGURE 3-2-3



NOTES:

- USE URBAN ACCESS STANDARDS WHEN PARKING REQUIRED.
- ADD 2' WHERE GUARDRAIL IS PLANNED

SHOULDER SECTIONS

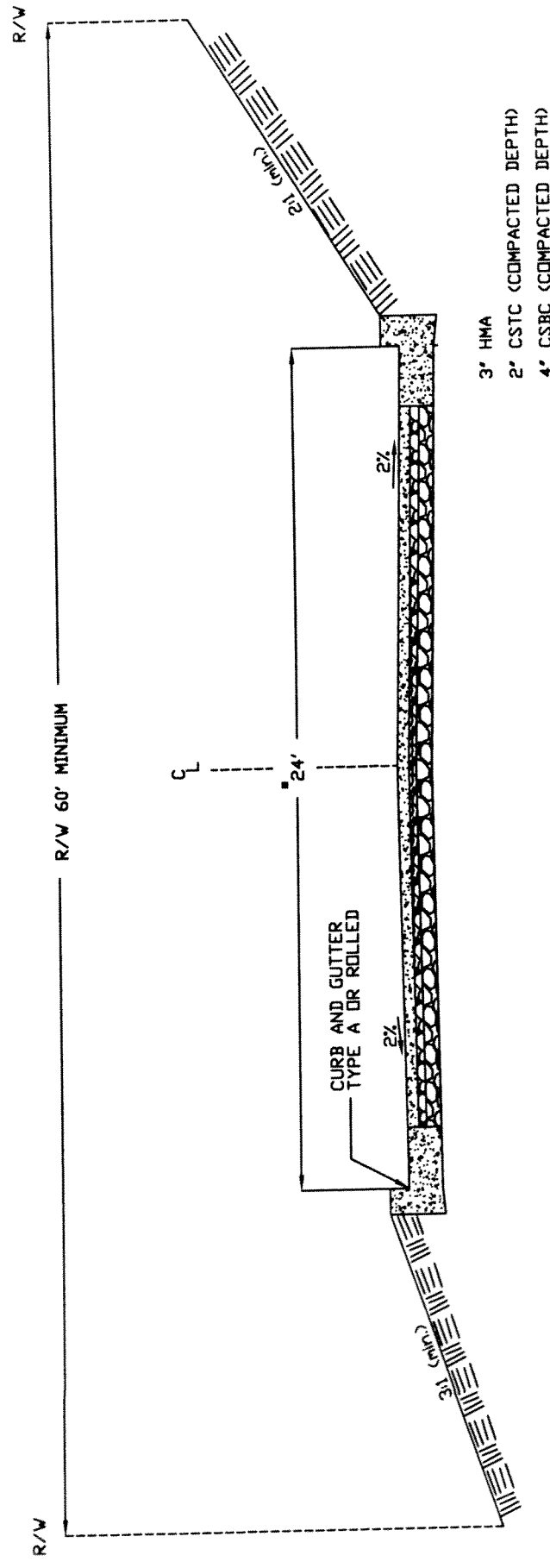
NOT TO SCALE

GRANT COUNTY
PUBLIC WORKS DEPARTMENT

ROADWAY
STANDARDS

MAJOR & MINOR COLLECTORS
RURAL ADT UNDER 400

APPENDIX B
FIGURE 3-3-1



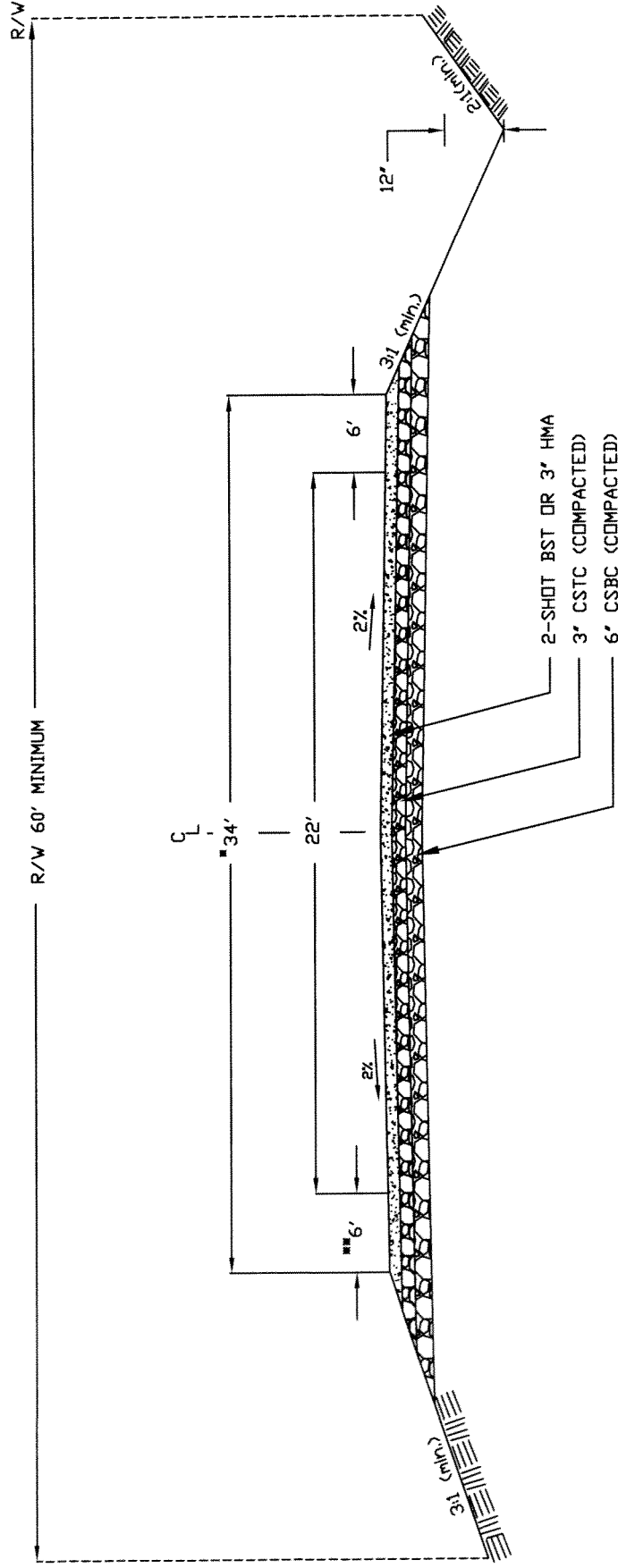
- 3' HMA
- 2' CSTC (COMPACTED DEPTH)
- 4' CSBC (COMPACTED DEPTH)

NOTES:

- USE URBAN ACCESS STANDARDS WHEN PARKING REQUIRED.

CURB SECTIONS

NOT TO SCALE



NOTES:

- * USE URBAN COLLECTOR STANDARDS WHEN PARKING REQUIRED.
- ** ADD 2' WHERE GUARDRAIL IS PLANNED.

SHOULDER SECTION

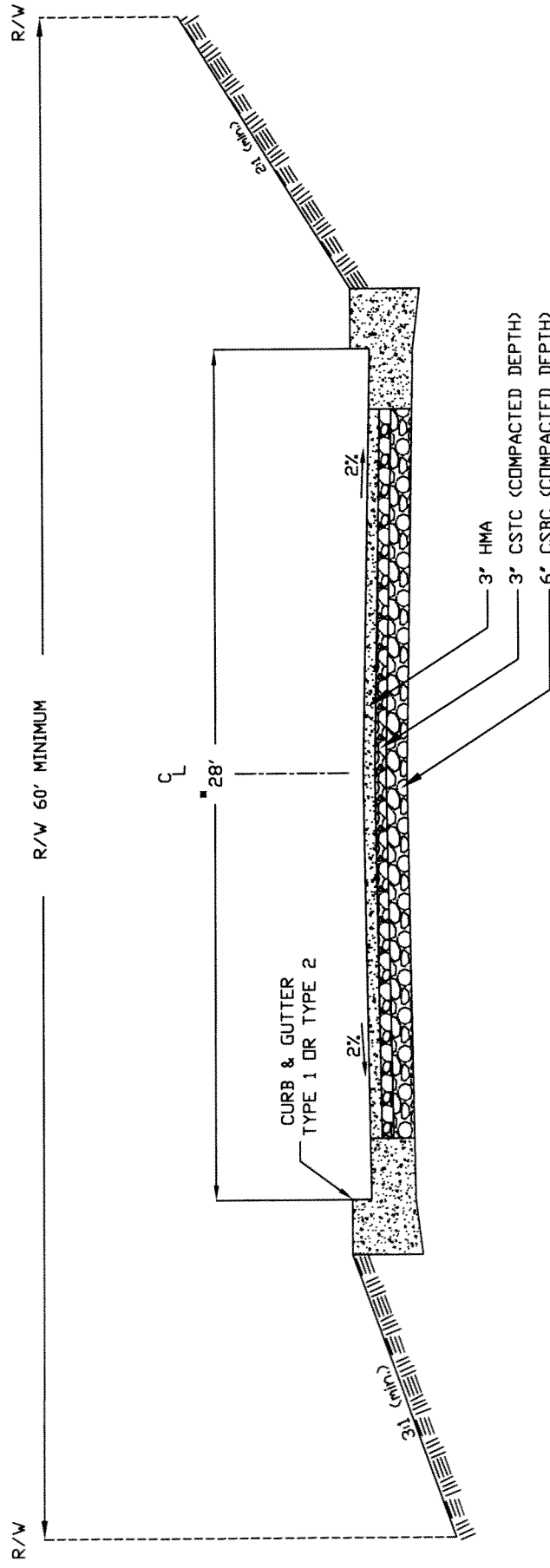
NOT TO SCALE

GRANT COUNTY
PUBLIC WORKS DEPARTMENT

ROADWAY
STANDARDS

MAJOR & MINOR COLLECTORS
RURAL ADT 400-2000

APPENDIX B
FIGURE 3-3-3



NOTES:

- * USE URBAN COLLECTOR STANDARDS WHEN PARKING REQUIRED.

CURB SECTION

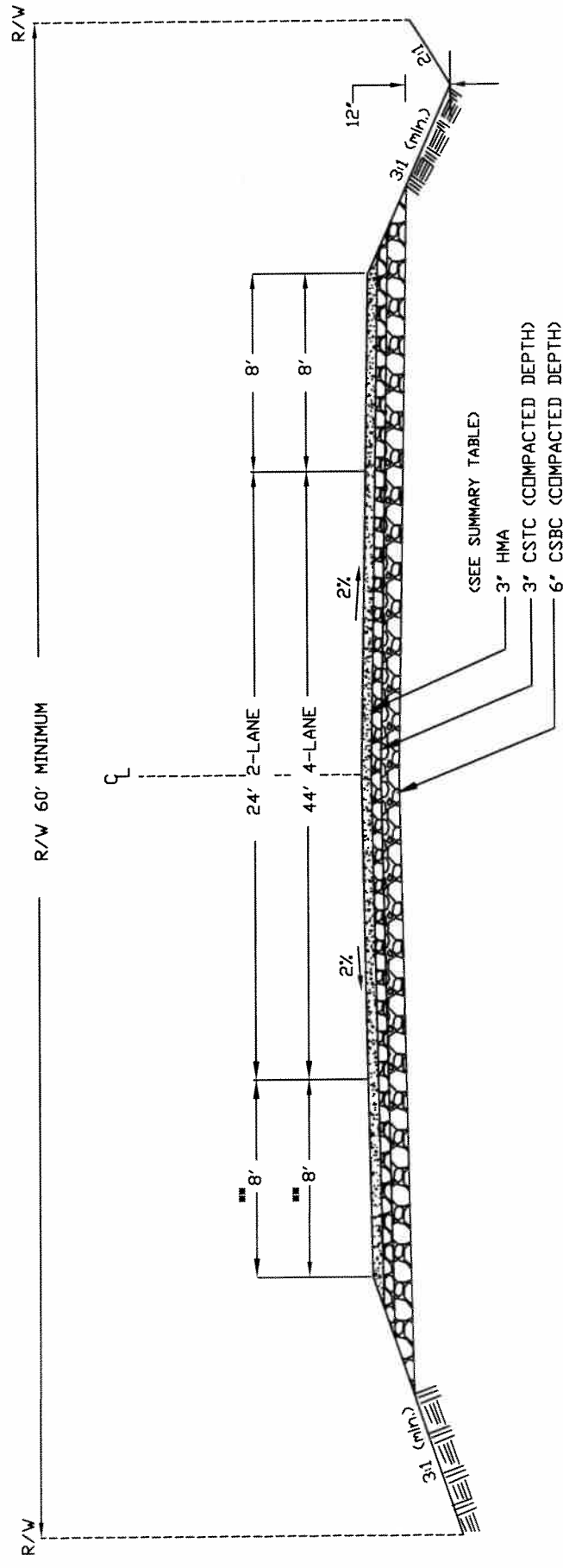
NOT TO SCALE

GRANT COUNTY
PUBLIC WORKS DEPARTMENT

ROADWAY
STANDARDS

MAJOR & MINOR COLLECTORS
RURAL ADT 400-2000

APPENDIX B
FIGURE 3-3-4



NOTES:
 ■■ ADD 2' WHERE GUARDRAIL IS PLANNED. SHOULDERS MAYBE REDUCED TO 6' WHEN SLOPE TO BOTTOM DOES NOT EXCEED 4:1.

SHOULDER SECTIONS

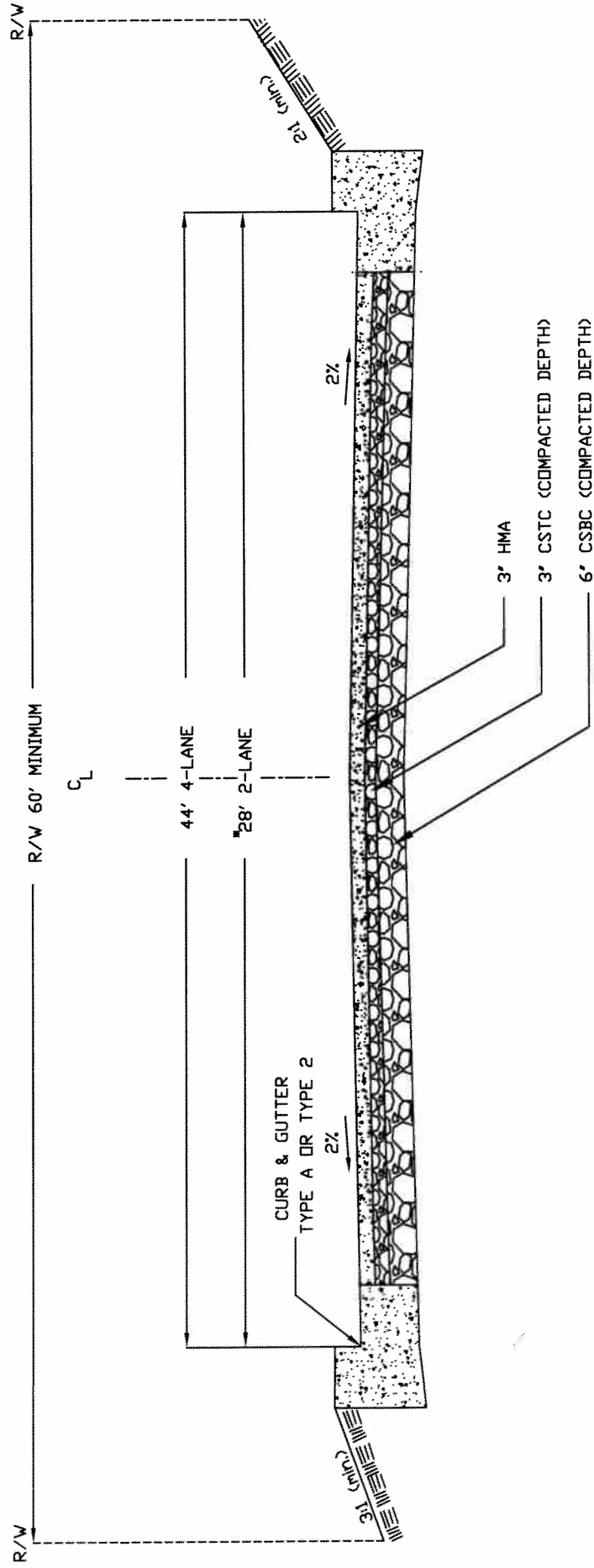
NOT TO SCALE

GRANT COUNTY
 PUBLIC WORKS DEPARTMENT

ROADWAY
 STANDARDS

MAJOR & MINOR COLLECTORS
 RURAL ADT OVER 2000

APPENDIX B
 FIGURE 3-3-5



NOTES:

* USE URBAN COLLECTOR STANDARDS WHEN PARKING REQUIRED.

CURB SECTIONS

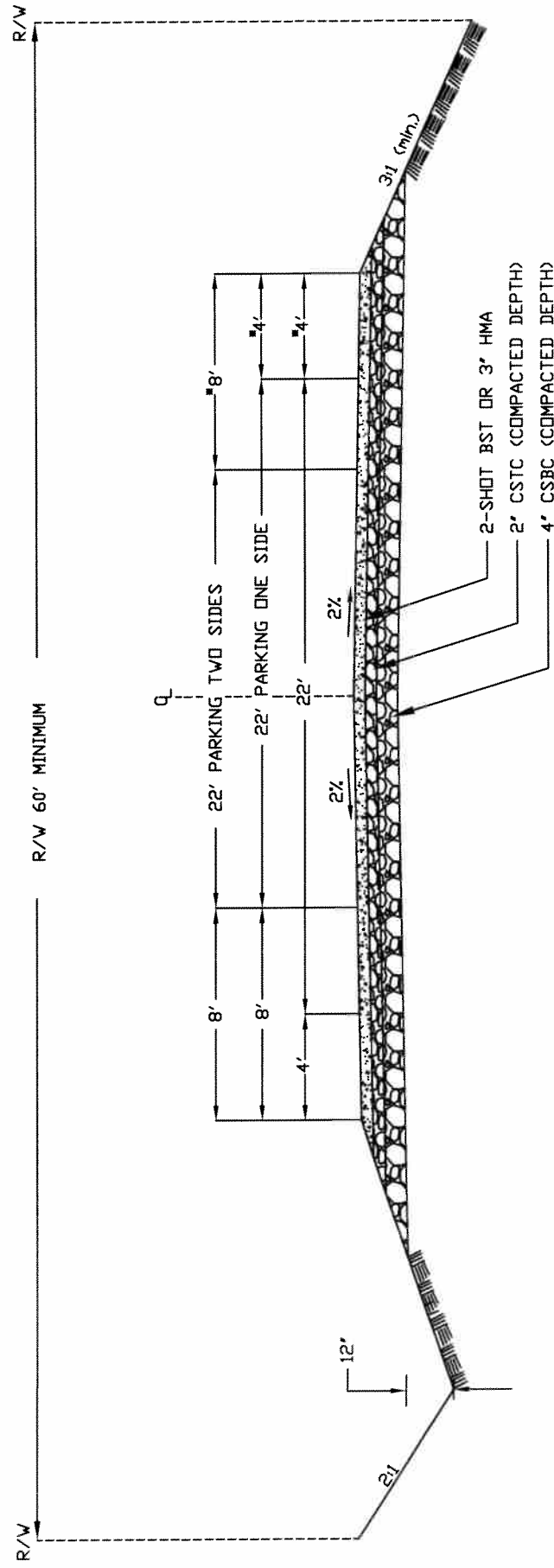
NOT TO SCALE

GRANT COUNTY
PUBLIC WORKS DEPARTMENT

ROADWAY
STANDARDS

MAJOR & MINOR COLLECTORS
RURAL ADT OVER 2000

APPENDIX B
FIGURE 3-3-6



NOTES:

- ADD 2' WHERE GUARDRAIL IS PLANNED.

SHOULDER SECTIONS

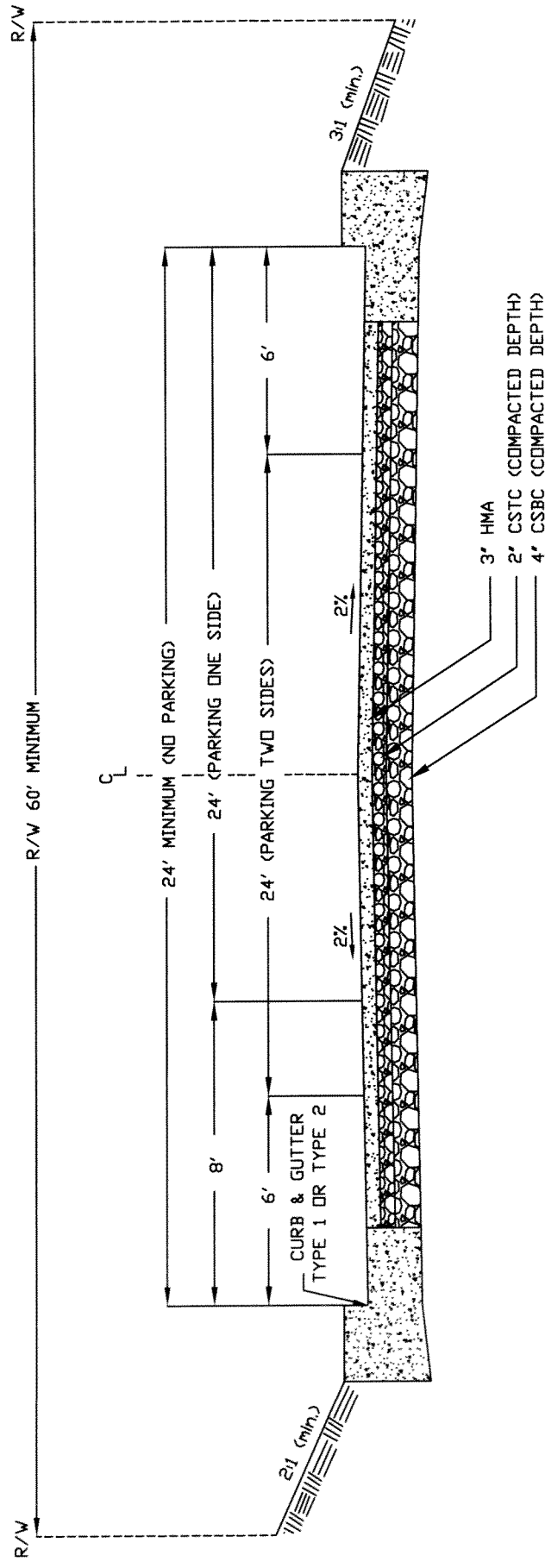
NOT TO SCALE

GRANT COUNTY
PUBLIC WORKS DEPARTMENT

ROADWAY STANDARDS

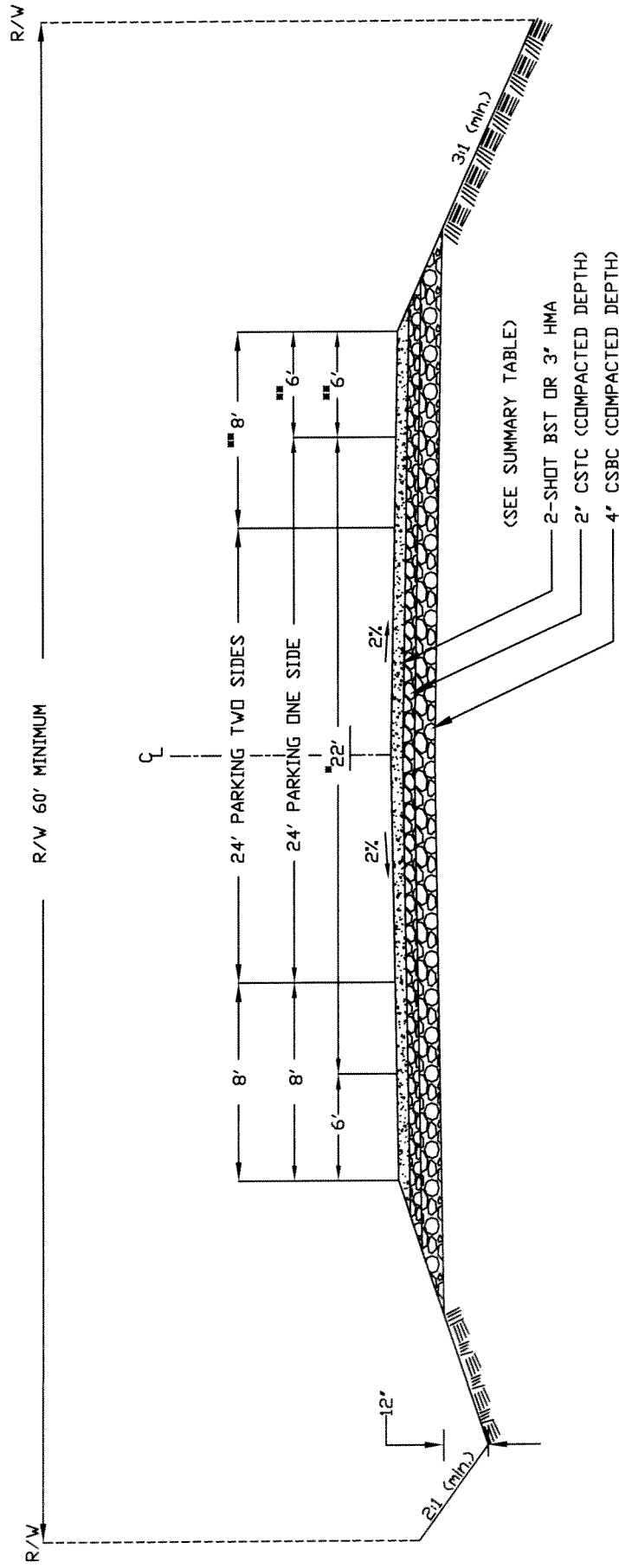
URBAN ACCESS STREETS

APPENDIX B
FIGURE 3-4-1



CURB SECTIONS

NOT TO SCALE



NOTES:
 * USE MINOR ARTERIAL STANDARDS FOR 4-LANE.
 ** ADD 2' WHERE GUARDRAIL IS PLANNED.

SHOULDER SECTIONS

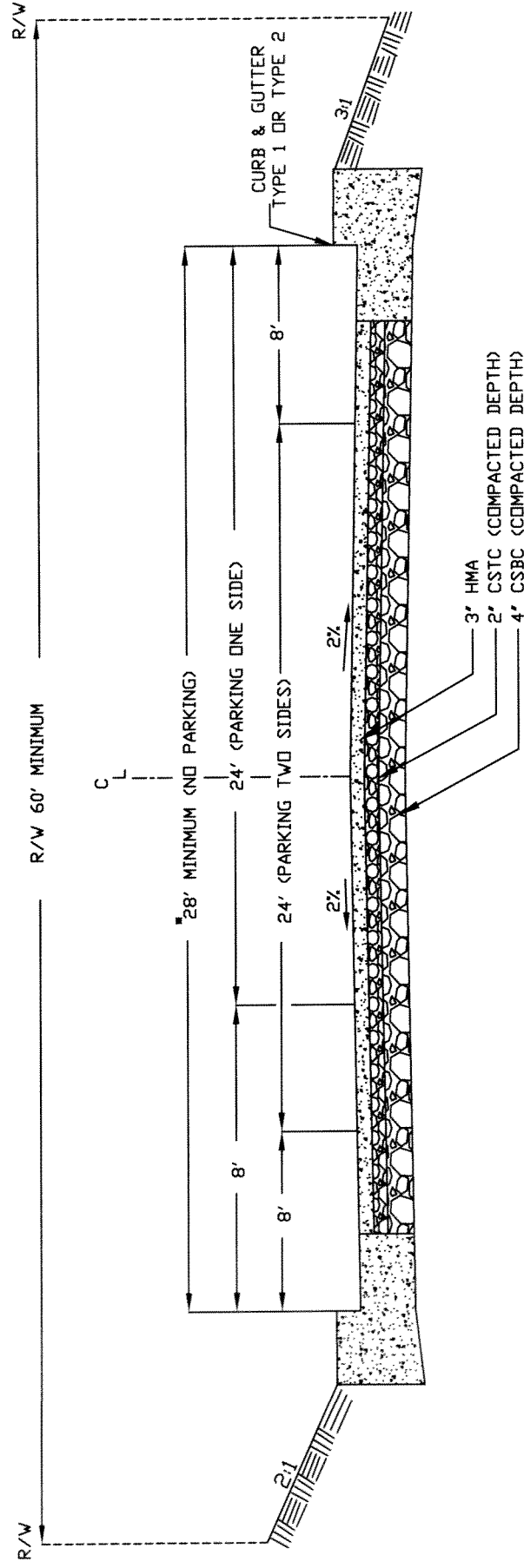
NOT TO SCALE

GRANT COUNTY
 PUBLIC WORKS DEPARTMENT

ROADWAY
 STANDARDS

URBAN COLLECTORS

APPENDIX B
 FIGURE 3-5-1



NOTES:
USE MINOR ARTERIAL STANDARDS FOR 4-LANE .

CURB SECTIONS

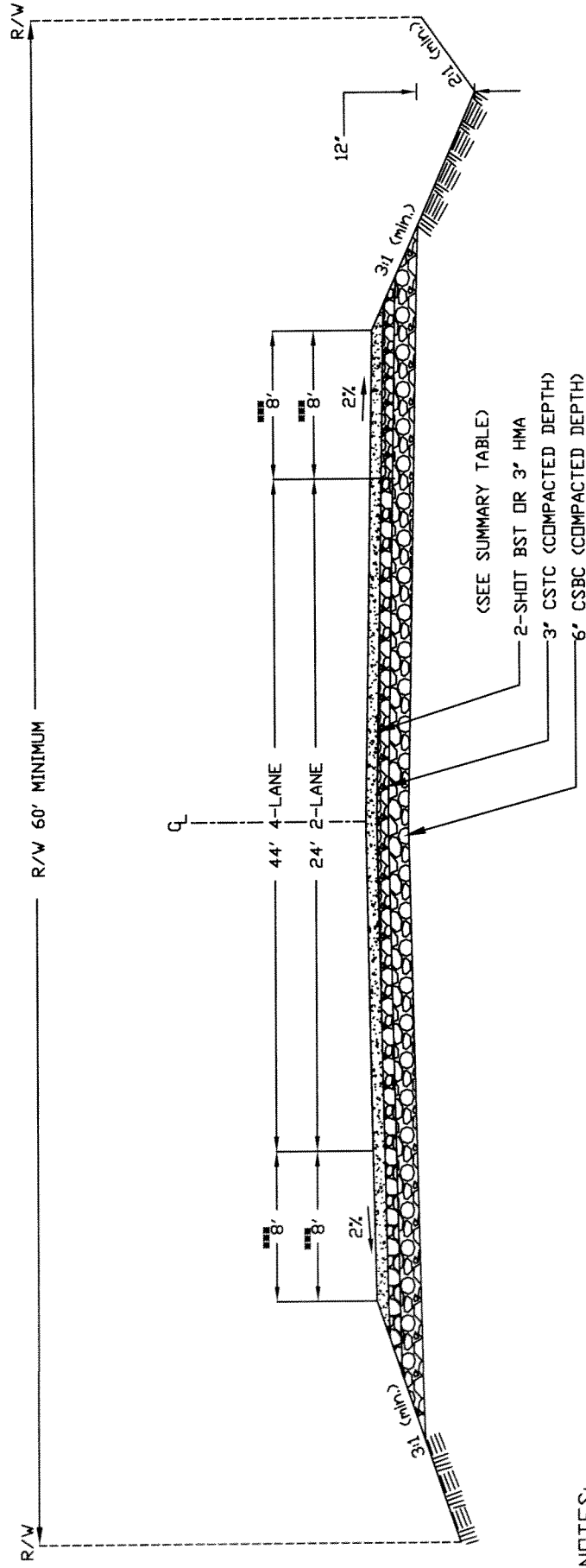
NOT TO SCALE

GRANT COUNTY
PUBLIC WORKS DEPARTMENT

ROADWAY
STANDARDS

URBAN COLLECTORS

APPENDIX B
FIGURE 3-5-2



NOTES:

*** ADD 2' WHERE GUARDRAIL IS PLANNED. SHOULDERS MAYBE REDUCED TO 6' WHEN SLOPE TO BOTTOM DOES NOT EXCEED 4:1.

SHOULDER SECTIONS

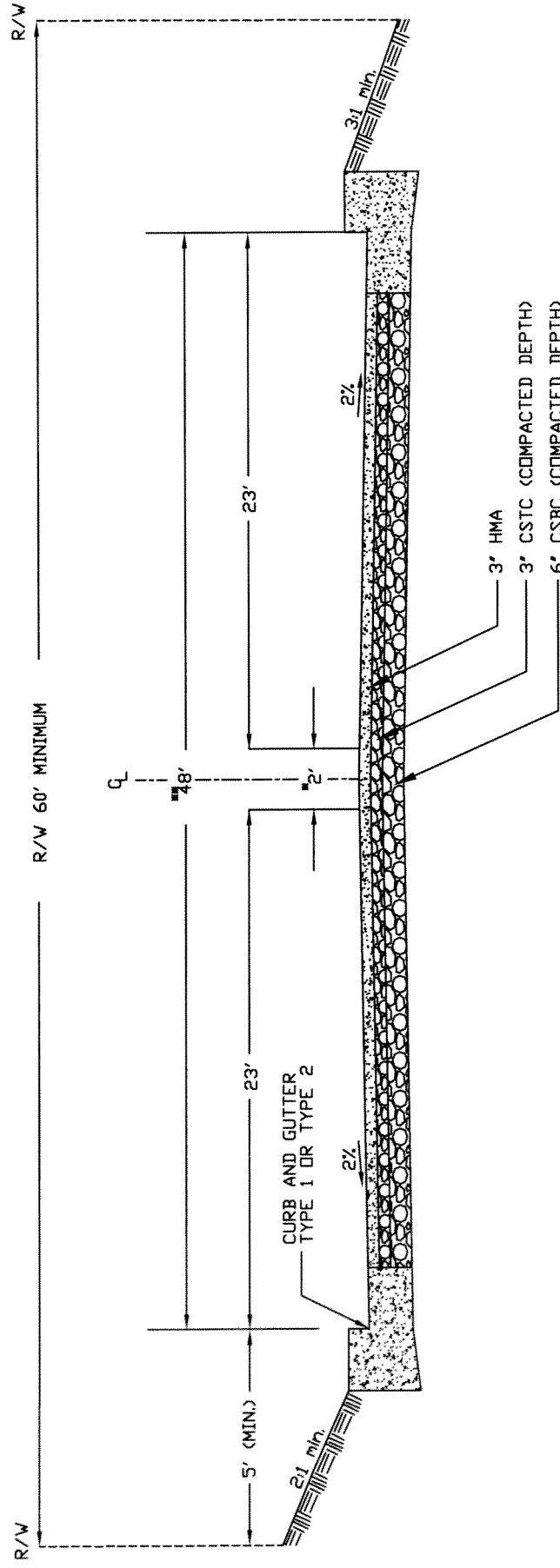
NOT TO SCALE

GRANT COUNTY
PUBLIC WORKS DEPARTMENT

ROADWAY
STANDARDS

MINOR ARTERIALS

APPENDIX B
FIGURE 3-6-1



NOTES:

- INCREASE TO 12' FOR TURNING LANE.
- 44' MAYBE USED IN SEVERELY RESTRICTED R/W, REQUIRES DEVIATION APPROVAL.

CURB SECTIONS

NOT TO SCALE

GRANT COUNTY
PUBLIC WORKS DEPARTMENT

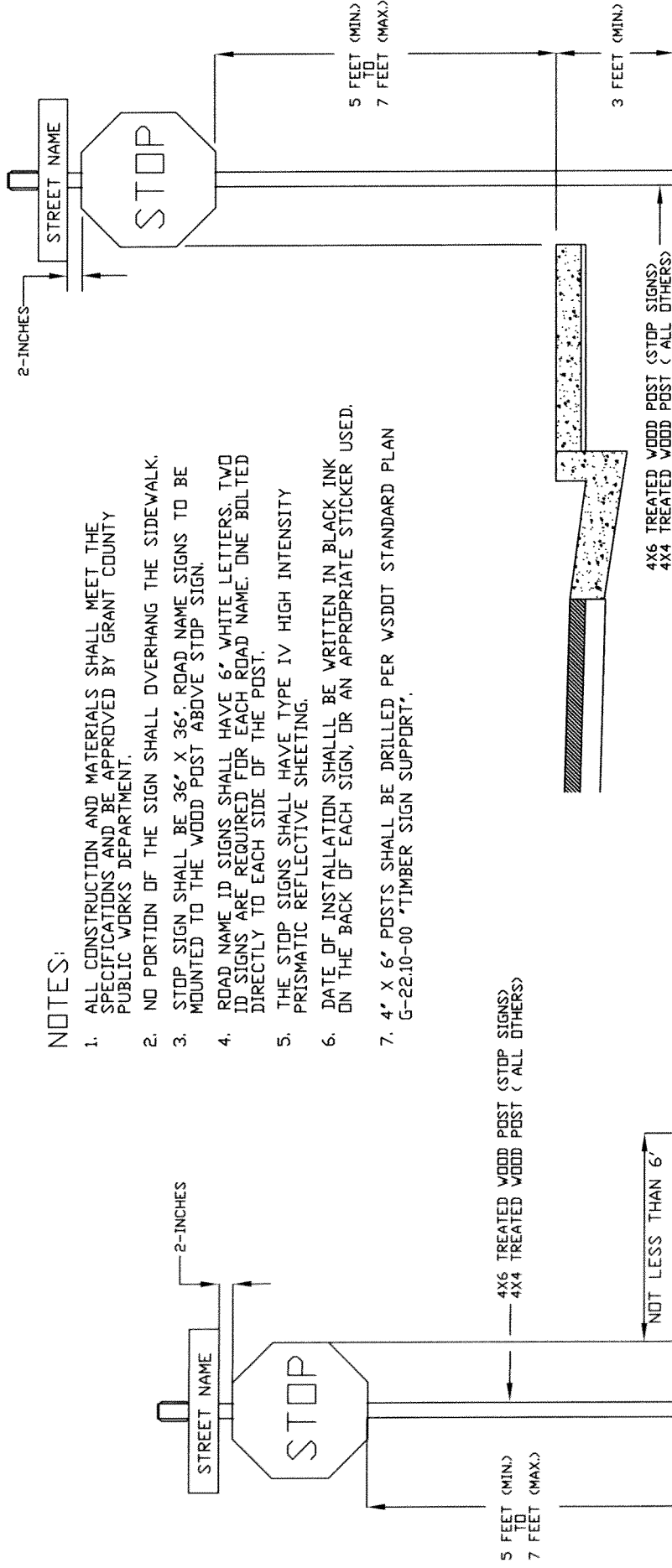
ROADWAY
STANDARDS

MINOR ARTERIALS

APPENDIX B
FIGURE 3-6-2

NOTES:

1. ALL CONSTRUCTION AND MATERIALS SHALL MEET THE SPECIFICATIONS AND BE APPROVED BY GRANT COUNTY PUBLIC WORKS DEPARTMENT.
2. NO PORTION OF THE SIGN SHALL OVERHANG THE SIDEWALK.
3. STOP SIGN SHALL BE 36" X 36". ROAD NAME SIGNS TO BE MOUNTED TO THE WOOD POST ABOVE STOP SIGN.
4. ROAD NAME ID SIGNS SHALL HAVE 6" WHITE LETTERS. TWO ID SIGNS ARE REQUIRED FOR EACH ROAD NAME. ONE BOLTED DIRECTLY TO EACH SIDE OF THE POST.
5. THE STOP SIGNS SHALL HAVE TYPE IV HIGH INTENSITY PRISMATIC REFLECTIVE SHEETING.
6. DATE OF INSTALLATION SHALL BE WRITTEN IN BLACK INK ON THE BACK OF EACH SIGN, OR AN APPROPRIATE STICKER USED.
7. 4" X 6" POSTS SHALL BE DRILLED PER WSDOT STANDARD PLAN G-22.10-00 "TIMBER SIGN SUPPORT".



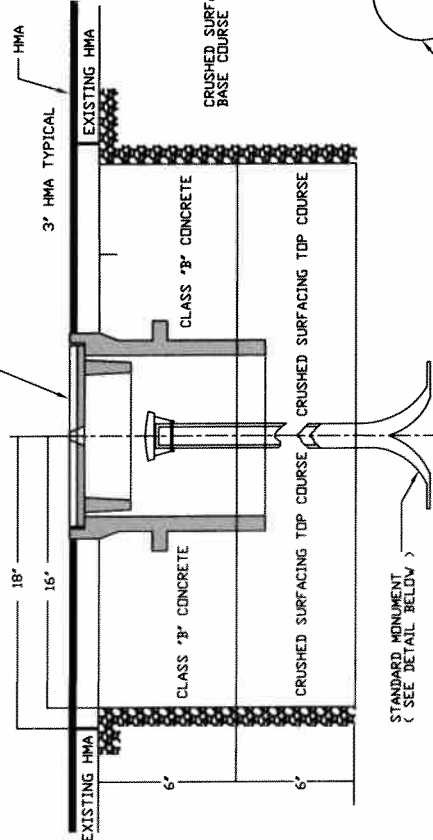
CURB SECTION

SHOULDER SECTION

STOP SIGN SECTION VIEW

NOT TO SCALE

STANDARD MONUMENT CASE & COVER
(SEE DETAIL AT RIGHT)



SURFACE SHALL BE
GROUND SMOOTH

3-1/2" D

CAST BRONZE



STANDARD ZINC
COATED STEEL
PIPE IN ACCORDANCE
WITH ASTM A - 123

END OF PIPE SPLIT AND
SPREAD TO FORM ANCHOR
6" END TO END SPREAD.

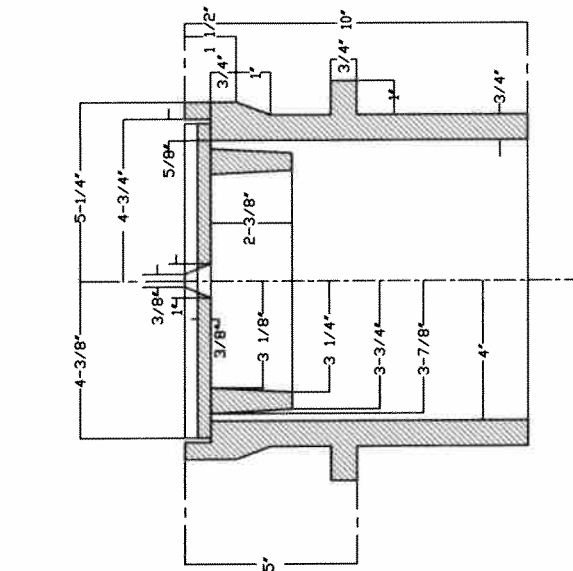
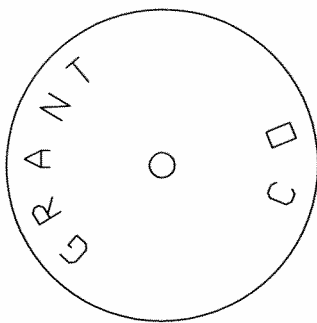
NOTES:

COVER AND SEAT SHALL BE MACHINED SO AS TO HAVE
PERFECT CONTACT AROUND THE ENTIRE CIRCUMFERENCE
AND FULL WIDTH OF BEARING SURFACE.

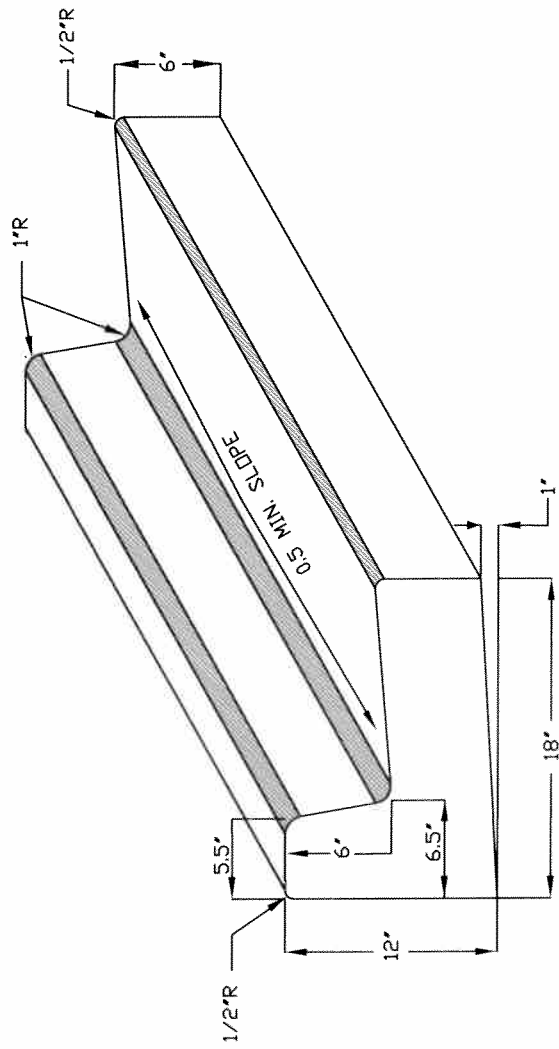
SPECIFICATIONS:

CAST IRON AS PER A.S.T.M. A48 CL 40
APPROXIMATE WEIGHT:
BODY 60 LBS.
COVER 20 LBS.

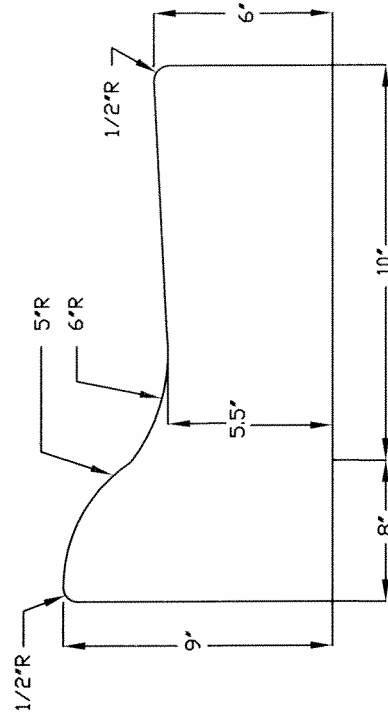
STANDARD MONUMENT: CAST BRONZE CAP PIN MOUNTED
TO 3/4" X 36" GALVANIZED PIPE, TO BE FURNISHED BY
CONTRACTOR IN ACCORDANCE WITH DIMENSIONS AND
SPECIFICATIONS SHOWN ON DRAWINGS.



NOT TO SCALE

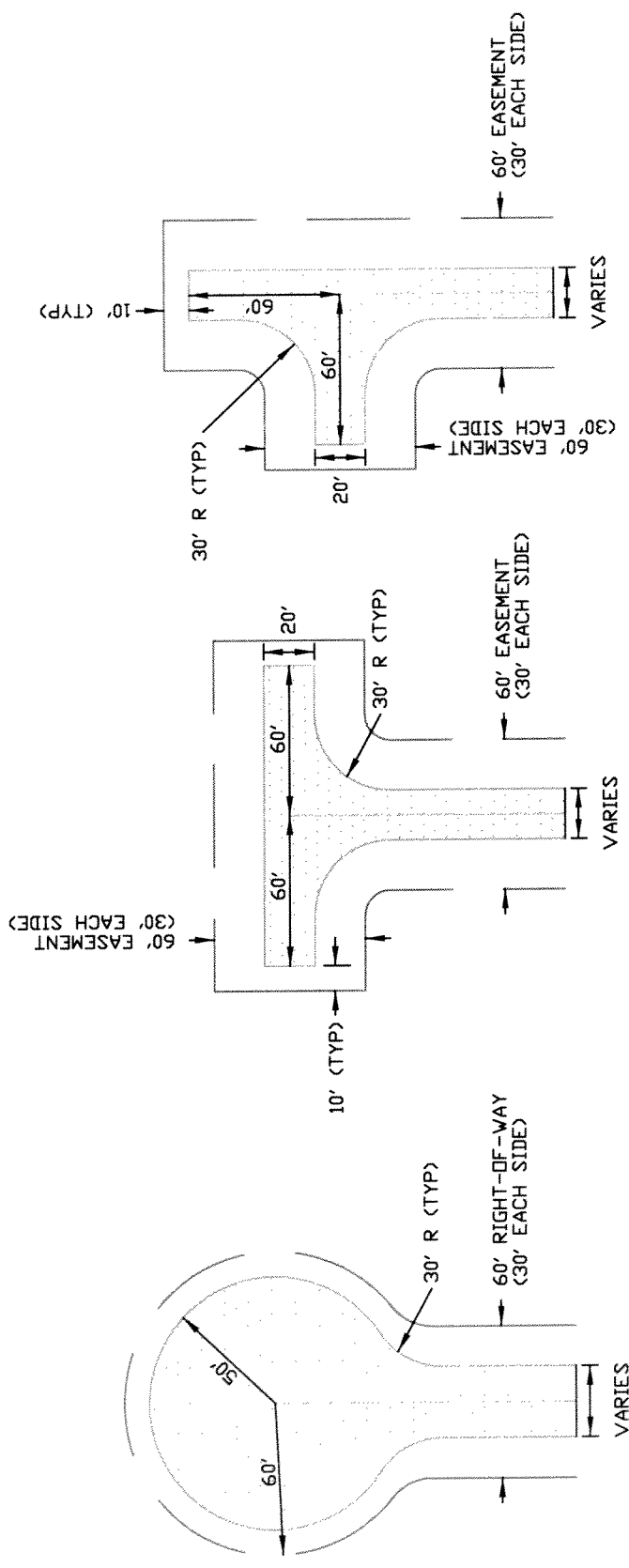


TYPICAL SECTION TYPE 1
CURB AND GUTTER



TYPICAL SECTION TYPE 2
ROLLED CURB AND GUTTER

NOT TO SCALE



CUL-DE-SAC

HAMMERHEAD TYPE 1

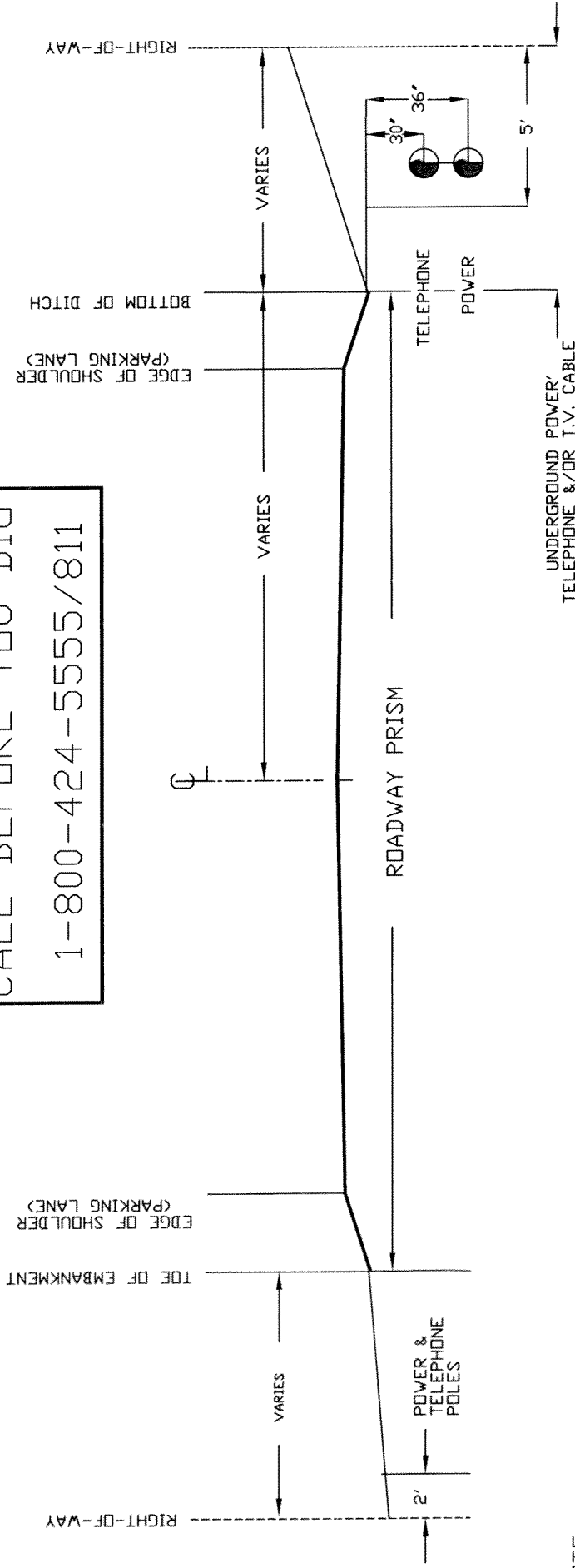
HAMMERHEAD TYPE 2

DEAD END TURN-AROUNDS

Hammerhead turn-arounds (Type 1 and Type 2) may only be used on Private Roads, unless approved by the County Road Engineer.

NOT TO SCALE

CALL BEFORE YOU DIG
1-800-424-5555/811



NOTE: SURFACE RUNOFF DRAINS AND STRUCTURES MAY APPEAR AT ALL DEPTHS.

GENERAL NOTES:

1. ALL UTILITIES SHOULD BE INSTALLED OUTSIDE THE ROAD PRISM.
2. SERVICE TAPS FOR WATER AND SEWER SHOULD BE INSTALLED PRIOR TO SURFACING AND PLAINLY MARKED WITH A 4"x4"x7' TREATED POST (EXPOSED).
3. ZONE DEPTHS APPLY TO CROSSINGS AS WELL AS LONGITUDINAL INSTALLATIONS.
4. INSTALLATIONS WITHIN THE ROADWAY PRISM MUST BE APPROVED BY THE COUNTY ENGINEER ON AN INDIVIDUAL BASIS. PLANS AND SPECIFICATIONS REQUIRED.

TYPICAL UTILITY DEPTH ZONES

- 0'-30' CLEAR (EXCEPT DRAINAGE STRUCTURES)
- 30'-36' U.G. TELEPHONE & TELEVISION.
- 36'-48' U.G. POWER.
- 48' + WATER AND SEWER.

NOT TO SCALE

Appendix C

Application to Construct Approach onto County Road

APPLICATION TO CONSTRUCT APPROACH ONTO COUNTY ROAD

RETURN TO: **GRANT COUNTY DEPARTMENT OF PUBLIC WORKS**
124 ENTERPRISE STREET S.E.
EPHRATA, WA 98823 (509) 754-6082

FOR OFFICIAL USE ONLY

PERMIT NO. _____

ROAD LOG NO. _____

MILE POST _____

Site Inspection Checked on: _____

Checked by: _____

District #: _____

Culvert: ☐ Yes ☐ No

NAME OF APPLICANT _____ DATE: _____

The undersigned hereby applies for permission to construct an approach onto County Road _____
(NAME OF COUNTY ROAD)

Location: _____ Parcel # _____
(DISTANCE TO NEAREST COUNTY ROAD INTERSECTION)

Approach Type: ☐ Residential ☐ Field ☐ Commercial ☐ Private Road ☐ Other _____
(DESCRIBE)

County Road Surface Type: ☐ Pavement ☐ Gravel ☐ Concrete ☐ Sidewalk ☐ Curb ☐ Other _____
(DESCRIBE)

****Applicants must complete the included site plan. Failure to do so will result in an incomplete application.****

Approach Width: _____ Feet (see page 2 of this permit)

All work is to be completed within _____ days of issuance of permit.

Is the applicant the legal owner of the property? ☐ Yes ☐ No

No, Please explain: _____

Site Address: _____ Approach Status: New _____ Existing _____
(Must Be Posted ON Site)

In accepting this permit, the applicant, his successors and assigns agree to protect and hold harmless Grant County for all claims, actions or damages of every kind and description which may accrue to or be suffered by any persons, corporation or property by reason of the performance of any such work, character of materials used or manner of installation, maintenance and operation or by the improper occupancy of rights of way or public places or public structure, and in case any such suit or action is brought against said county for damages arising out of or by reason of any of the above causes, the applicant, his successors or assigns will upon notice to him or them or commencement of said action defend the same at his or their sole cost and expense and fully satisfy any said judgment after the said suit or action shall have finally determined if adversely to the County. The applicant further agrees the permit is revocable by the County upon notification, if the conditions of issuance are not complied with.

ADDRESS: _____ PHONE: _____

SIGNATURE: _____

Applicants must provide the original form signed by the applicant to the Public Works office. Faxes are not acceptable.

PERMIT

Subject to all supplemental conditions set forth below, and the County Road Approach Requirements shown on the reverse side of this form.
Permission is hereby granted to the above named applicant to construct the approach as described herein.

Supplemental conditions:

ISSUED BY: _____ DATE: _____

It is the responsibility of the applicant to notify all utilities and affected private property owners when their facilities or property could be damaged through the performance of the above work and the applicant shall make all necessary arrangements to protect such property and / or utilities.

UTILITY DAMAGE IS COSTLY. CALL BEFORE YOU DIG.
1-800-424-5555

COUNTY ROAD APPROACH REQUIREMENTS

All county road approaches such as driveways, private roads, and public accesses shall be built in accordance with the following requirements and R.C.W. 36.75.130 through 150.

A. General Conditions:

1. A permit shall be obtained through the Grant County Department of Public Works before constructing any approach to a County road.
2. The permit shall specify the individual requirements and location of the approach, and shall be subject to inspection by County.
3. Construction deficiencies noted by the County shall be corrected within 30 days.

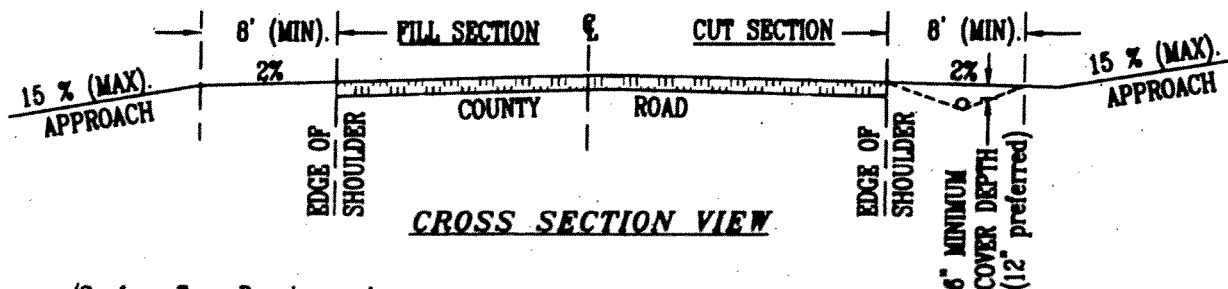
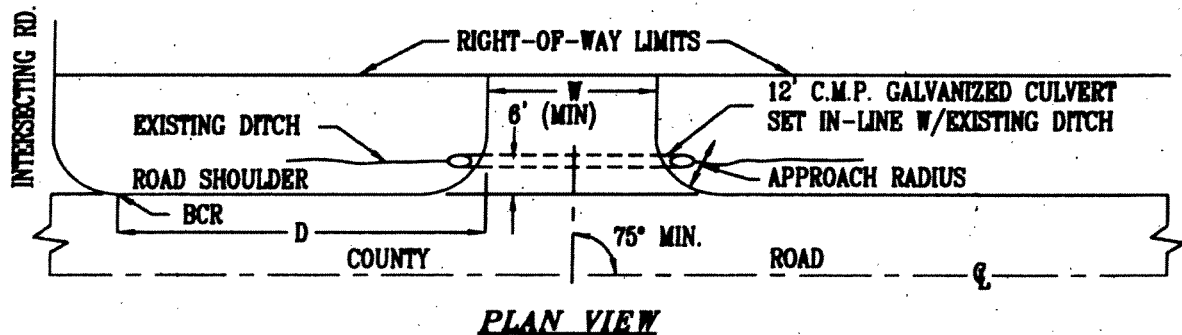
B. Geometric/Location Requirements:

All approaches must have sufficient sight distance for the posted speed limit and shall conform to the following limits for the type shown:

APPROACH TYPE	ALLOWABLE WIDTHS(W)	RADIUS (MIN)	PIPE ¹	PIPE LENGTH ²	COVER (MIN)	MIN. DISTANCE TO NEAREST APPROACH OR INTERSECTION (D) ^{3,4}
Residential	12' to 20'	10'	12" C.M.P. Galvanized	26' - 34'	0.5'	20' or 50'
Farm	16' to 24'	15'		32' - 40'	0.5'	50'
Commercial	20' to 30'	20'		44' - 54'	1.0'	50' or 100'
Heavy Commercial	30' to 40'	20'		54' - 64'	1.0'	100'
Public/Private Road	24' Min.	30'		60' Min.	1.0'	100' (min)

NOTES:

1. The County Road Engineer may require a larger pipe diameter for existing drainage conditions or waive pipe installation entirely if special conditions exist.
2. Add 6 ft. for each foot of ditch depth in excess of 2 ft. w/fill slope @ 3:1. Pipe lengths coincide with allowable approach widths.
3. Distance shall be measured from the beginning of the curve radius (BCR) at the intersecting road intersection to the nearest edge of the driveway. If no radius exists, the measurement shall begin 20' from edge of intersecting road shoulder.
4. Use larger distance for approaches to County arterials or if intersecting road is a State Highway.



C. Maintenance/Surface Type Requirements:

1. At a minimum, the property owner shall construct and maintain a gravel surface on the approach within the County road right-of-way. A concrete surface may be used if a full depth expansion joint is provided at the road right of way.
2. The property owner shall keep all culverts clean and free of all sediments, brush, weeds, etc. at all times and shall not restrict the flow of surface water run-off.
3. Maintenance of the approach and all appurtenances thereto is the responsibility of the permittee.



Grant County
Department of Public Works
124 Enterprise St. S.E.
Ephrata, WA 98823



TO: BUILDING PERMIT APPLICANTS

FROM: GRANT COUNTY PUBLIC WORKS DEPARTMENT

SUBJECT: APPROACH/ACCESS PERMITS TO COUNTY ROADS

Please be advised that State law (RCW 36.75.130) requires a permit before any approach is built or constructed onto any County road. (For approaches onto a State Highway contact Washington State Department of Transportation). An application form is attached which should be completed and returned to the Grant County Public Works Department at least one (1) week prior to the construction of any approach/access to a Grant County road. If the application is completed properly and there are no problems with the location, size and/or type of approach applied for, the permit should be issued within one (1) week of receipt of the application.

General requirements (RCW 36.75.140) and restrictions for road approaches/accesses are listed on the back of the application for your information. When locating your approach consideration should be given to maximizing the distance a vehicle using the approach is visible for obvious safety reasons. The minimum acceptable sight distance for a single user approach based upon the posted speed of the County road is as follows. The minimum distance does increase for multiple user approaches.

<u>POSTED SPEED (MPH)</u>	<u>MINIMUM SIGHT DISTANCE (ft)</u>
55	575
50	515
40	415
35	360
30	310
25	260
20	210

Construction of an approach/access without a permit or in non-conformance with the County requirements is a misdemeanor (RCW 36.75.150). In addition unpermitted or improperly constructed approaches may be removed without notice by the County.

PERMIT APPLICATION FEE - \$0

ADDRESS:

Grant County Public Works
124 Enterprise Street S.E.
Ephrata, WA 98823

TELEPHONE NO. - (509) 754-6082
FAX NO. - (509) 754-6087

"PROVIDING THE PUBLIC SAFE, RELIABLE, RESOURCE EFFECTIVE LOCAL GOVERNMENT SERVICES WITH INTEGRITY."

Information.....(509) 754-6082
FAX.....(509) 754-6087
E-mail.....publicworks@co.grant.wa.us
Derek Pohle, P.E., Director/County Engineer.... Ext. 504
Dave Heilman, Assistant Director..... Ext. 502

Bob Bersanti, Construction Engineer..... Ext. 503
Greg Cardwell, Office Engineer..... Ext. 117
Fran Woods, Accountant..... Ext. 105
Vic Levesque, Foreman-Sign Shop.....(509) 754-6085
Janice Goeden, Solid Waste.....(509) 754-4319

Dean Carroll, Supervisor-Dist. No. 1.....(509) 754-6586
Dennis Collier, Supervisor-Dist. No. 2.....(509) 765-4172
John Brissey, Supervisor-Dist. No. 3.....(509) 787-2321
Darrell Doolittle, Supervisor-Central Shop.....(509) 754-6086
Jerome Wawers, Bridge Supervisor.....(509) 754-6082

APPROACH PERMIT SITE PLAN

In order to process Approach Permits, all submissions shall include a complete site plan map of the proposed approach location; submission of an incomplete site plan map will be considered as an incomplete application and returned to the applicant. The site plan shall include a plot plan of your lot showing the location of the approach being applied for as well as any ditches, canals, or landscaping that may have an affect on the location of or site distance of the approach. The applicant shall show the name of the road the approach will front on as well as note the distance to the nearest County Road intersection.

Applicant Name: _____ Date: _____

Parcel #: _____ Drawing Scale: _____

North Arrow

Direction to the site: _____

Appendix D

Application to Perform Work on County Road Right-of-Way

GRANT COUNTY PUBLIC WORKS

124 Enterprise Street SE
Ephrata, WA. 98823
Phone (509) 754-6082 Fax (509) 754-6087

For Office Use Only

Permit No. _____

Road Log NO. _____

APPLICATION TO PERFORM WORK ON COUNTY ROAD RIGHT-OF-WAY

NAME OF APPLICANT _____ DATE _____

Type of work ☐ Electrical ☐ Water ☐ Power ☐ Phone ☐ Gas ☐ Other _____

Name Of County Road: _____

Road Crossing: Yes ☐ No ☐ Side of Road: ☐ North ☐ South ☐ West ☐ East

Crossing Type: ☐ Push/Bore ☐ Cut/Patch ☐ Trench

Section _____

Township _____ North

Range _____ East

The undersigned hereby applies for permission to: _____

Pursuant to franchise _____ Dated _____

The estimated time required for completion of the above work is _____ which the petitioner agrees to prosecute with all diligence and speed with due regard for the rights, interest and conveniences of the public.

Petitioner further agrees to perform the work in strict compliance with the provisions enumerated below and states that he has read and will adhere to the general provisions applicable to permits contained on the reverse side of this form.

*****APPLICANT MUST PROVIDE A SITE PLAN SHOWING SITE LOCATION AND LOCATION OF UTILITIES TO BE INSTALLED IN RELATION TO THE COUNTY ROAD*****

ADDRESS: _____ PHONE: _____

SIGNED: _____ BY: _____

TITLE: _____ JOB NO. _____

PERMIT

Subject to all terms, conditions, and provisions written or printed below or on any part of this form. PERMISSION IS HEREBY GRANTED THE ABOVE APPLICANT TO:

A bond in the amount of _____ is required to insure compliance with the above conditions, said bond to be kept in force and effect for a period of _____ years following completion of work authorized by this permit. No work shall be done under this permit until the party or parties to whom it is granted shall have communicated with and received instructions from _____

Phone _____. This permit shall be void unless the work herein contemplated shall have been completed before _____, 2006.

APPROVED BY: _____ DATE: _____

It is the responsibility of the applicant to notify all utilities and private property owners when such property is liable to injury or damage through the performance of the above work and the applicant shall make all necessary arrangements relative to the protection of such property and/or utilities.

UTILITY DAMAGE IS COSTLY. CALL BEFORE YOU DIG.
1-800-424-5555

INSTRUCTIONS FOR APPLICANTS

Applicants for permits to occupy county property with utilities, or holders of granted franchise rights contemplating work upon, along, over, under or across any county road, bridge, wharf, trestle, public place, street, avenue, or alley on property in the County, shall first file with the County Engineer, his or their application to do such work.

Such applications shall be in triplicate and, accompanied by drawings, also in triplicate if required by the County Engineer. Drawings shall be to a working scale, showing position and location of work, names or numbers and width of roads, streets, etc., showing their location in plats, or subdivisions of sections, township and range, showing the relative position of such work to existing utilities, constructed, laid, installed or erected upon such roads, streets or public places.

The applicant shall specify the type of construction by submitting plans showing the class of material and the manner in which the work is to be accomplished. All such materials and equipment shall be of the highest quality and the manner of excavation, fills, construction, installation, erection of temporary structures, traffic turnouts, road obstruction, barricades, etc., shall meet with provisions of the County Utility Accommodation Policy (WAC 136-40), and shall require approval by the County Engineer. Signing, barricades and traffic control in the vicinity of the work shall strictly conform to provisions of "The Manual on Uniform Traffic Control Devices for Street and Highways." The applicant shall pay to the County all costs of, and expenses incurred in the examination, inspection and supervision of such work on account of the granting of said permits.

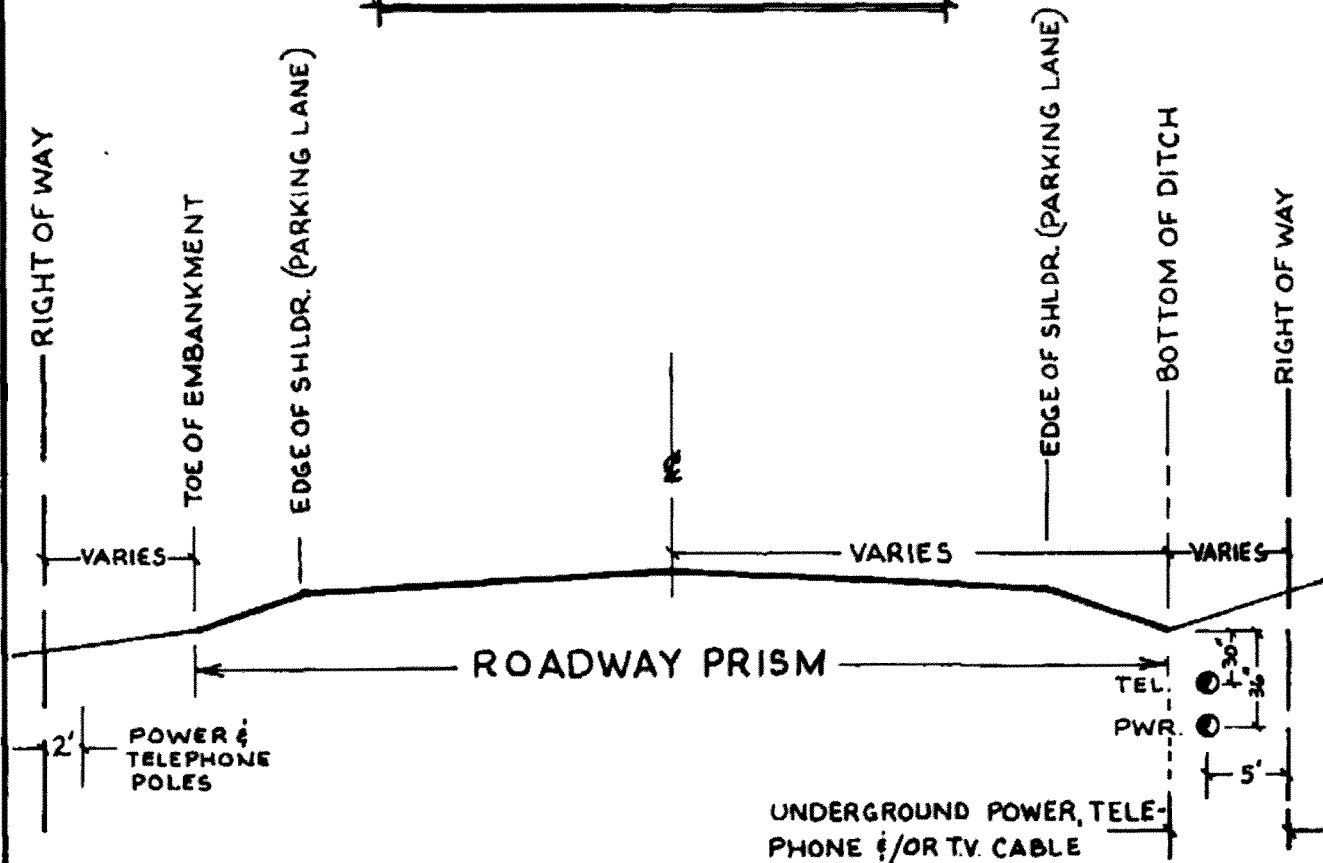
The actual location of the work to be done under this permit, its depth below or above surface or grade of any County structure, road, street, avenue, alley or public place shall be approved by the County Engineer before any work shall be done by the petitioner.

PERMIT CONDITIONS

1. The petitioner, designated herein as the "grantee," his successors and assigns, shall have the right and authority to enter upon the right of way of the County road, street, alley, public place or structure as indicated on the front of this form, for the purpose of doing such work as applied for, and approved by the County Engineer.
2. The location, type of work, materials and equipment used, manner of erection of construction, safeguarding of public traffic during work or after doing same, mode of operation and manner of maintenance of project petitioned for, shall be approved by the County Engineer so as to assure proper compliance with the terms of this permit.
3. The grantee shall commence work within 30 days after the granting of this permit. If, at end of six (6) months after date of granting same the grantee shall have not completed the installation, then the rights herein conferred shall cease and terminate.
4. The grantee shall leave all roads, streets, alleys, public places, and structures after installation and operation or removal of utility, in as good and safe a condition in all respects as same were in before commencement of work by grantee.
5. In case of any damage to any roads, streets, public places, structures or public property of any kind on account of said work by the grantee, he will at once repair said damage at his own sole cost and expense.
6. The County Engineer, his agents or representatives may do, order, or have done any and all work considered necessary to restore to a safe condition any street, alley, public place or structure which is in a condition dangerous to life or property resulting from the Grantee's facility or its installation as permitted herein, and upon demand the grantee shall pay to the County all costs of such work or materials.
7. If at any time the County deems it advisable to widen, grade, regrade, plank, pave, improve, alter or repair any road, street, public place of structure, the grantee upon written notice by the County Engineer, his representatives or agents, will at his own sole cost and expense, raise, lower change, move or reconstruct such installations to conform to the plans of work contemplated or ordered by the County.
8. If upon written notice by the County Engineer the grantee fails to relocate any portion or all of the project as granted under this permit, the County, its agents or representatives may do any work at the cost and expense of the grantee, and all costs to remove or reconstruct same, shall be born by the grantee.
9. All such changes, reconstruction or relocation by the grantees shall be done in such manner as will cause the least interference with any of the County's work and shall be subject to the same provisions which control an original installation. The County shall in no wise be held liable for any damage to the grantee by reason of any such work by the County, its agents or representatives, or by the exercise of any rights by the County upon roads, streets, public places or structures in question. The grantee shall have twenty-four (24) hours written notice by the County Engineer or his representatives or agents of any blasting contiguous to the grantee's permit rights in order that he may protect his interests.
10. This grant or privilege shall not be deemed or held to be an exclusive franchise, nor prohibit the County from granting other permits or franchise rights of like or other nature to other public or private utilities, nor shall it prevent the County from using any of its roads, streets, public places, for any and all public use, or affect its jurisdiction over all or any part of them.
11. All the provisions, conditions, regulations and requirements herein contained shall be binding upon the successors and assigns of the grantee and all privileges of the grantee shall inure to such successors and assigns as if they were specifically mentioned.
12. The County Engineer may revoke, annul or terminate this permit if grantee fails to comply with any or all of its provisions, requirements or regulations as herein set forth or through willful or unreasonable neglect, fails to heed or comply with notices given him or if the work herein permitted, is not installed or operated and maintained in conformity herewith or at all.
13. The Board of County Commissioners may at any time, change, amend, modify, amplify or terminate any of the conditions herein enumerated so as to conform to any state statute or county regulation pertaining to the public welfare, safety, health or highway regulations as are, or may hereinafter be enacted, adopted or amended, etc. The Board may terminate this permit if grantee fails to comply with any such changes.
14. Petitioner by accepting this permit agrees to notify and check with all utilities regarding their installations before commencing work, together with private property owners when such property is liable to injury or damage through the performance of such work, and the applicant shall make all necessary arrangements relative to the protection of such property and / or utilities.
15. In accepting this permit the petitioner, his successors and assigns agrees to protect and save harmless the County from all claims, actions or damages of every kind and description which may accrue to or be suffered by any person or persons, corporation or property by reason of the performance of any such work, character of materials used or manner of installation, maintenance and operation or by the improper occupancy of rights of way or public places or public structures, and in case any such suit or action is brought against said County for damages arising out of or by reason of any of the above causes, the petitioner, his successors or assigns will upon notice to him or them or commencement of such action defend the same at his or their sole cost and expense and will fully satisfy any judgment after the said suit or action shall have finally been determined if adversely to the county.
16. Any person, corporation, association, department, or subdivision of state, county, or municipality responsible for an activity that may cause a survey monument to be removed or destroyed shall be responsible for ensuring that the original survey point is perpetuated. (WAC 332-120-030(2))

TYPICAL UTILITY INSTALLATION

CALL BEFORE YOU DIG
1-800-424-5555



TYPICAL UTILITY DEPTH ZONES

- 0"-30" CLEAR (EXCEPT DRAINAGE STRUCTURES)
- 30"-36" U.G. TELEPHONE AND TELEVISION.
- 36"-48" U.G. POWER.
- 48"+ WATER AND SEWER.

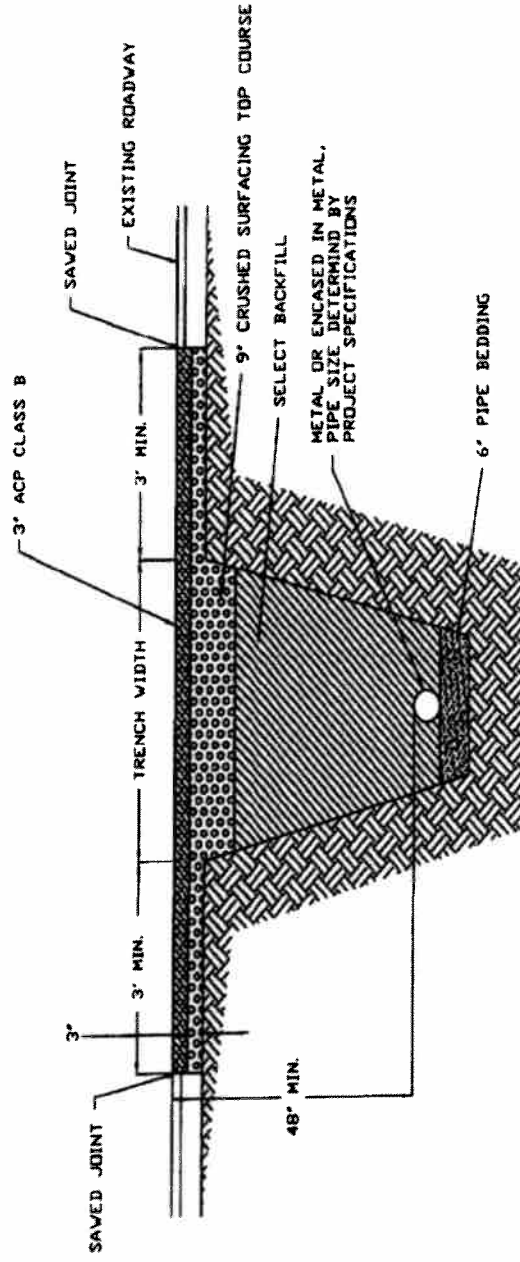
NOTE: SURFACE RUNOFF DRAINS & STRUCTURES MAY APPEAR AT ALL DEPTHS.

GENERAL NOTES

1. ALL UTILITIES SHOULD BE INSTALLED OUTSIDE THE ROADWAY PRISM.
2. SERVICE TAPS FOR WATER & SEWER SHOULD BE INSTALLED PRIOR TO SURFACING AND PLAINLY MARKED WITH A 4" x 4" x 7' TREATED POST. (1' EXPOSED)
3. ZONE DEPTHS APPLY TO CROSSINGS AS WELL AS LONGITUDINAL INSTALLATIONS.
4. INSTALLATIONS WITHIN THE ROADWAY PRISM MUST BE APPROVED BY THE COUNTY ENGINEER ON AN INDIVIDUAL BASIS. PLANS AND SPECIFICATIONS REQUIRED.

NOTES:

- ALL LAND OWNERS SHOULD BE CONTACTED PRIOR TO ANY WORK BEING PERFORMED ADJACENT TO THEIR PROPERTY.
- ALL APPROACHES MUST BE RESTORED IMMEDIATELY AFTER PLACING PIPE.
- ALL PRIVATELY OWNED FACILITIES (irrigation pipes, fences, etc.) DAMAGED DURING PLACEMENT MUST BE REPAIRED IMMEDIATELY.
- ONE WAY TRAFFIC MUST BE MAINTAINED AT ALL TIMES. ALL WORK SHALL BE PERFORMED DURING DAYLIGHT HOURS ONLY
- AND ALL TRENCHES MUST BE COMPLETELY BACKFILLED AT THE END OF EACH WORKING DAY.
- FLAGGERS AND WARNING SIGNS CONFORMING TO THE MUTCD, MUST BE USED WHENEVER EQUIPMENT IS IN THE ROADWAY.
- ALL ROAD CROSSINGS AND LOCATIONS WHERE THE TRENCH IS WITHIN 25' OF THE ROADWAY CENTERLINE, MUST BE MECHANICALLY COMPACTED TO 95% MAXIMUM DENSITY USING SUFFICIENT WATER TO OBTAIN RESULTS.
- IF THE ROADWAY SURFACE CANNOT BE COMPLETELY REPAIRED BY THE END OF THE WORKING DAY, THE REMOVED PAVEMENT AREA SHALL BE BACKFILLED TO FULL DEPTH WITH CSTC AND APPROPRIATE WARNING SIGNS WITH AMBER FLASHERS BE ERECTED THE PROPER DISTANCE ON EACH SIDE OF THE WORK AREA.
- ALL ROADWAY SECTIONS, INCLUDING SHOULDERS AND DITCHES, DAMAGED DURING CONSTRUCTION MUST BE RESTORED TO ORIGINAL OR BETTER CONDITION, WHICH MAY REQUIRE REPLACING CSTC ON DAMAGED SHOULDERS.
- ALL WORK IS SUBJECT TO INSPECTION AND FINAL APPROVAL BY GRANT COUNTY.



TYPICAL ROADWAY CROSSING